REPORT RESUMES

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VOCATIONAL READINESS FOR YOUNG DISABLED STUDENTS IN NEW YORK CITY, A 3-YEAR INTERIM REPORT OF A 5-YEAR COLLABORATIVE STUDY.

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NEW YORK STATE EDUCATION DEPT., ALBANY

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DESCRIPTORS- EXPERIMENTAL GROUPS, ADOLESCENTS, CONTROL GROUPS, *HANDICAPPED STUDENTS, PHYSICALLY HANDICAPPED, EMOTIONALLY DISTURBED, MENTALLY HANDICAPPED, *VOCATIONAL EDUCATION, *OCCUPATIONAL GUIDANCE, SOCIAL ADJUSTMENT, *VOCATIONAL REHABILITATION, VOCATIONAL ADJUSTMENT, ACADEMIC ACHIEVEMENT, *EXPERIMENTAL PROGRAMS, FOLLOWUP STUDIES, INDIVIDUAL CHARACTERISTICS, COMPARATIVE ANALYSIS,

THE PURPOSE OF THE STUDY WAS TO DEMONSTRATE THE FEASIBILITY OF APPLYING COORDINATED VOCATIONAL REHABILITATION, EDUCATIONAL, AND GUIDANCE SERVICES TO SEVERELY HANDICAPPED CHILDREN BETWEEN 14 AND 16 ON THE PREMISE THAT THESE STUDENTS MIGHT BE UNABLE TO TAKE MAXIMUM ADVANTAGE OF SERVICES INITIATED AT A LATER AGE. FIFTY-FIVE PHYSICALLY HANDICAPPED, 35 MENTALLY RETARDED, AND 50 EMOTIONALLY DISTURBED STUDENTS CONSTITUTED THREE UNITS, EACH OF WHICH WAS SUBDIVIDED INTO EXPERIMENTAL AND CONTROL GROUPS. BOTH GROUPS HAD AN INITIAL MULTI-PHASED APPRAISAL. THE EXPERIMENTAL GROUPS RECEIVED VOCATIONAL AND SOCIAL TRAINING 2 DAYS A WEEK FOR 15 MONTHS. BOTH GROUPS WERE REAPPRAISED AT THE END OF THE SECOND YEAR, AND INTERVIEWED 12 MONTHS LATER CONCERNING PERSONAL, SOCIAL, EDUCATIONAL, AND VOCATIONAL ADJUSTMENT. STUDENTS IN THE EXPERIMENTAL GROUP IN THE PHYSICALLY HANDICAPPED UNIT SHOWED IMPROVEMENT IN INTELLECTUAL LEVEL OF FUNCTIONING, SCHOOL ACHIEVEMENT, AND VOCATIONAL PROGRESS. ACHIEVEMENT RESULTS OF THE MENTALLY RETARDED WERE INCONCLUSIVE. OF ALL THE GROUPS, THE EMOTIONALLY DISTURBED SHOWED THE LEAST AMOUNT OF CHANGE IN INTELLECTUAL, SOCIAL AND VOCATIONAL AREAS. INCLUDED ARE STATISTICAL TABLES, DETAILED SOCIOLOGICAL AND MEDICAL DATA, THUMBNAIL SKETCHES OF THE PERFORMANCE HISTORY OF EACH OF THE EMOTIONALLY DISTURBED STUDENTS, AND SAMPLES OF THE INSTRUMENTS USED IN THE STUDY. (JK)

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Vocational Readiness
for
Young Disabled Students
in
New York City

A 3-YEAR INTERIM REPORT
OF
A 5-YEAR COLLABORATIVE STUDY

The University of the State of New York
The State Education Department
Division of Vocational Rehabilitation
Albany, New York 12224
April, 1966

VT004092

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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A 3-Year Interim Report of a 5-Year Study

on

"The Effectiveness of Early Application of Vocational Rehabilitation Services in Meeting the Needs of Handicapped Students in a Large Urban School System"

THE UNIVERSITY OF THE STATE OF NEW YORK

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LETTER OF TRANSMITTAL

THE UNIVERSITY OF THE STATE OF NEW YORK
THE STATE EDUCATION DEPARTMENT
162 WASHINGTON AVENUE
ALBANY, NEW YORK 12210

ADRIAN LEVY
ASSISTANT COMMISSIONER FOR
VOCATIONAL REHABILITATION

April 29, 1966

Dr. James E. Allen, Jr.
Commissioner of Education
State Education Department
Albany, New York

Dear Dr. Allen:

We are now completing the fourth year of our project examining the effectiveness of early and special services for handicapped students in a large, urban school system. The special program for Study Group I was completed last year. In view of the interest expressed in this "Handicapped Students Research Project", it appeared desirable to prepare a report summarizing our experiences with Study Group I rather than wait for completion of the project and the final report.

Transmitted herewith is the three-year interim Progress Report on the "Handicapped Students Research Project". This report has been authored by Morris Klapper, the able Director of the project and covers the experience of Study Group I from June 1962 through June 1965, including the one year followup. Reporting conclusive findings has been cautiously avoided until the replication has been completed on Study Group II. Significant experiences and trends have been observed and these have been treated in detail.

Perhaps the most serious area for review is in those sections dealing with the "600" school students. If, in the future, an increased number of similar youths are to receive the community's vocational services, agencies will need to re-examine and revise their philosophies, practices, and structure if they are to deliver adequate, effective, and timely service.

To find remedies for the myriad of complex problems, it is certain that a good deal of imaginative, creative, and daring experimentation will be necessary for a long period of time.

This report is presented for your consideration.

Sincerely yours,

Adrian Levy

Adrian Levy
Assistant Commissioner for
Vocational Rehabilitation

Preface

This is an interim report of the first 3 years' experience of a 5-year collaborative study, the idea for which received its first impetus from the recommendation of the Division of Vocational Rehabilitation staff more than 5 years ago. Consultation and advice was immediately sought and obtained from key personnel in other Divisions of the State Education Department; their suggestions and ideas were extremely valuable at that time, as has been their subsequent thinking as the Project progressed. Arranging for the involvement of seven different agencies in addition to a major Division and three Bureaus of the New York City Board of Education, planning the project design, obtaining Federal support,* and engaging a Project Director delayed the start until June 1962. During the next 2 months several actions were effected in order to expedite implementation of the study: a) an interagency Coordinating Committee was created and met in July 1962, to consider and act upon basic policy matters; b) a Research Advisory Committee was created and met in July to review the research design and suggest certain modifications; c) a committee of examining psychologists was created and met to review the study's test requirements and use of rating instruments; d) other project staff was appointed; e) case-finding was begun with the cooperation of the Board of Education; f) evaluation teams were set up for each of the three disability categories for purposes of case screening and assignment; and g) conferences were conducted with each of the three private rehabilitation agencies to design comprehensive programs as set forth in contractual responsibilities.

By early October 1962, a study sample had been almost completely selected and was already undergoing its initial evaluation. The project has moved along on schedule and has thus far yielded a body of experience which seems to be highly illuminating. Although the design calls for a replication phase (now under way), it was thought the Study has a responsibility to share its experience with the professional community. The many inquiries that have been received about the

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* This study is being supported in part by a Research and Demonstration Grant (RD 829) from the Vocational Rehabilitation Administration, U.S. Department of Health, Education, and Welfare, Washington, D.C.

Study during the past 3 years led to the decision that the experiences thus far, good and bad, may be helpful to others with similar interests.

The successful execution of the Project's design and program were made possible in large part, by the unusually high degree of interest and cooperation of the several collaborating agencies (see Appendix G), and the many members of their staffs. Although it is not feasible to mention here all those individuals whose contributions enriched our efforts, a word of special thanks must be given to the splendid cooperation of the chief collaborator, the New York City Board of Education and, in particular, its (former) Division of Child Welfare and its Director, Mr. Richard Lubell, Assistant Superintendent. This support and cooperation never diminished from the incipiency of the Project in 1962, when it received the enthusiastic endorsement of the Superintendent of Schools in New York City, Dr. John J. Theobald.

The Project Director has complemented the quantitative findings freely with insights into general programmatic situations and into specific cases of many students. This coalition of quantitative and qualitative analysis is essential to a true understanding of what really went on during these 3 years. The need for this kind of data analysis was cogently expressed by Dr. Gordon Allport when he addressed the 73d Annual Meeting of the American Psychological Association in Chicago on September 6, 1965. " Empiricism, which in psychological terms means objective experimentation and analysis, dashes forth like a headless horseman," Dr. Allport said. " It has no rational objective, uses no rational method other than the mathematical; it lets the discordant data sing for themselves."

This report, on the other hand, has attempted a harmonic style and seems to be very much on key. We trust the reader's ear is well attuned, and he is not disturbed by a few sour notes.

MORRIS KLAPPER
Project Director

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Handicapped Students Research Project

Interim Three-Year Progress Report

Morris Klapper, Project Director
Walter Neff, Ph.D., Research Consultant

I. INTRODUCTION

As stated in the original protocol supporting the V.R.A. grant application, " This study is intended to demonstrate the feasibility of the early application of coordinated vocational rehabilitation, educational, and guidance services for severely handicapped students who are enrolled in the special classes and schools of New York City, and for whom difficulties in occupational adjustment are anticipated.

" The early provision of such services, at age 14 or over, is planned in order to meet the needs for special educational and vocational guidance and other services of students who, with similar severe disabilities at a later age, might be unable to take maximal advantage of vocational rehabilitation services initiated as they approach termination of their school program. These multiple needs must be met by an integrated, rather than separated, program of services by public and voluntary agencies."

The need for the study emerged from the empirical experience of several agencies demonstrating that severely disabled students who are about to leave school are remarkably ill-prepared to undertake vocational responsibilities. Their disabling medical condition coupled with educational, emotional, or psycho-social deficits render their vocational potential, at best, highly uncertain.

In order to increase the possibility for future vocational success of the disabled 17- or 18-year-old leaving school, it was thought that specialized preparation might be instituted effectively at an earlier age, say 14 to 16, while the student is still in school. The combined efforts of the local Board of Education, the State Division of Vocational

Rehabilitation, and appropriate other community resources would be organized in an effective scheme to achieve the desired objectives.

The basic premise of the project, with its emphasis on *early* vocational services, is being tested against 5 objectives:

1. To enhance the student's self-image and self-sufficiency.
2. To overcome difficulties in peer relationships.
3. To help parents' reality-perception of their children.
4. To expand students' knowledge of the world of work.
5. To help students develop specific, desirable work habits, vocational skills, and aptitudes.

An additional overall, ultimate objective is to determine which activities in the Project's experience could be transferred and made part of the Board of Education's continuing educational curriculum.

II. METHODOLOGY

A. The Research Design

The project design evolved from the original aims of the research proposal, the problems of case-finding that had been encountered in the public schools, and the characteristics of the service-providing voluntary agencies. As the design was modified and developed during the early part of the first project year, it incorporated the following chief features:

1. *Composition of Sample*

Four distinct categories of handicapped students were to be studied: the Physically Disabled; the severe Cerebral Palsied (these two later were combined into a single Unit 1); the Educable Mentally Retarded (Unit 2); and the "Emotionally Disturbed" or Socially Maladjusted (Unit 3). The first Unit was established from pupils in the Health Conservation classes of the public schools who met certain criteria; the second Unit was drawn from pupils attending the C.R.M.D. classes (Children with Retarded Mental Development); the third Unit was obtained from students assigned to the "600" schools created by the Board of Education for "Socially Maladjusted" students. Since each Unit was made up of a distinct category of the handicapped, and since each Unit was served by a separate voluntary agency, the feeling was that we were dealing with three separate studies, rather than a single research. All subsequent data was to be analyzed, therefore, on a Unit basis.

2. *Age of Sample*

The pupils who entered the project were to be children who had reached their 14th birthday, but who had not yet passed their 16th birthday.

3. *Sex*

Each Unit was to include both boys and girls in approximately equal numbers, for both Experimentals and Comparisons.

4. *Sample Subdivision: Experimentals and Comparisons*

Each Unit was to be subdivided into approximately equal numbers of Experimentals (E's) and Comparisons (C's), matched as subgroups for age, sex, nature of handicap, I.Q., and school achievement.

5. *Initial Appraisal*

The basic plan of the study included a multi-phased initial appraisal for both E's and C's within each Unit during a 3-month period of the first study year; vocational and social training, 2 days a week, for a period of approximately 15 months for E's only; and a reappraisal for both E's and C's during a 2-month period at the end of the second school year. At the end of an additional 12-month period, all E's and C's were to receive an intensive followup interview, covering all aspects of personal, familial, school and vocational progress. The components of the initial appraisal, to be repeated at reappraisal, included the following:

a. An intensive intake interview by a D.V.R. counselor, supplemented by interviews with family and a home visit. Information sought included present school performance, educational and vocational aspirations, socioeconomic data, attitudes and expectations.

b. A medical and/or psychiatric examination, with provisions for special examinations, if required.

c. Psychological testing, including both intellectual and emotional characteristics.

d. School achievement, as measured by standard tests of verbal and numerical achievement.

e. A vocational evaluation. The latter involved 10 to 15 full days of vocational observation in a vocational agency, during which the student was confronted with a range of work tasks in a workshop setting, as well as being measured by several objective vocational instruments to determine the extent of fine and gross skills and aptitudes.

6. *Training*

At the conclusion of initial appraisal, E's continued with the service agency and received a variety of vocational and social services designed to improve their readiness and potential for employment. This service continued for approximately three school semesters. C's received no such services during the same period, except for their schooling.

In conjunction with the vocational training program at the rehabilitation agency, both the school teacher and D.V.R. counselor played an active and continuing role. Teachers' roles differed in different units, based upon the needs of the group at any given time. These varied from different forms of remediation, to application of vocational problems in the classroom (measuring distance, interpreting instructions, etc.) to enforcing discipline, planning and/or participating in trips to industry. The D.V.R. counselor was the liaison and catalyst responsible for meshing all participating units and assuring clients' involvement and follow-through on all phases of the program, e.g., case selection, review of work assignments, problems of discipline and attendance, relevant contacts with family, arranging necessary medical services, and conducting regular, periodic inter-agency staff conferences.

7. *Reappraisal*

At the conclusion of the training period, both E's and C's were reappraised in the same five areas in which initial appraisal had taken place.

8. *Followup*

Twelve months after the end of reappraisal, both E's and C's were sought out for an individual followup interview and assessed in a number of areas of personal, social, educational, and vocational adjustment (see Followup Interview Schedule, Appendix A).

9. *Research Instruments*

A number of research instruments were devised to supply some of the quantitative data intrinsic to the Study. These were multi-item rating scales (Appendix B), which were to be used by the various professionals involved with each Unit. There were 5 such scales: the Psychiatrist's Scale, the Psychologist's Scale, the Counselor's Scale, the Teacher's Scale and the Vocational Scale. The objective was to provide means for comparing the various appraisals of status and progress which were required by the separate phases of the Study.

In addition to these evaluation scales, the Followup Schedule included a number of scalor items.

B. *Screening and Case-Finding* (Units I, II, III)

1. *Project Plan as Originally Outlined in Proposal*

In the original protocol for the study, plans were drawn to

> "maintain the experimental demonstration samples as four class groupings intact within their school settings. The size of the samples will correspond to existing practices of class size in the schools (see Table 1).
>
> "Although data for the current year (1960–61) are not available as yet, the trend of decreasing size of these special classes will undoubtedly continue. In order to conform to current practice, the demonstration experimental class groups will be maintained with a register of 12–15 students.

"Experimental and Comparison group schools will be selected under the supervision of the Project Director on the basis of the representativeness of the handicap distribution within their special classes, and of the socioeconomic status of the school as determined by the Board of Education. If the registers of handicapped pupils within the selected schools are adequate to provide sufficient numbers for both experimentals and comparison populations, both groups will be allocated to the same school to control school effects. If frequencies are sufficient to provide only one class of 12 to 15 pupils, the experimental and comparison groups will be drawn from two schools serving the same handicap classification, and which show comparable handicap distribution and socioeconomic status.

"The entire study universe can be defined as all those boys and girls who come within the four handicap classifications and who are of age 14 at the time of initiation of the Project. A random selection of subjects will be made within each handicap group, with equal numbers of boys and girls assigned to the experimental and comparison groups.

"The total size of the experimental group at any point in the course of the study will range between 48 and 60 subjects. A grand total of 192 to 240 students will be included in all the experimental and comparison groups."

2. *Modifications in Original Project Plan*

This procedure, outlined when the protocol was first submitted in 1960, had to undergo some modification when the project finally got under way in the summer of 1962. The change in case-selection procedure had to do primarily with students in Health Conservation classes where, it was found, although the class sizes were accurately depicted, no single school could provide anywhere near a complete Experimental or Comparison sample of 12 to 15 students with severe disability in the appropriate age group. Consequently, instead of extracting our study sample from approximately 4 schools, as originally visualized, we found it necessary to review material on over 400 potential candidates scattered in more than 30 schools in 4 boroughs of New York City. This broadened case-finding experience, and the ultimate distribution of our approved study sample among 20 schools increased enormously the scope of our administrative and staff responsibilities.

The most difficult of the 3 groups to locate was the physically handicapped. Students in H.C. classes in New York City public schools, for the most part, display mild to moderate disabilities and do not fall into the category of severe disability, as do the severe cerebral palsies and related neuro-muscular conditions. We were faced with the necessity of weeding out scores of students with acute ailments, such as a variety of fractures, malnutrition, under-par, undefined orthopedic disability, minimal congenital anomalies, vague diagnoses of heart disease, and so forth — conditions which in our judgment did not represent serious problems for future vocational and occupational adjustment. The mentally retarded and so-called emotionally disturbed were much more easily obtained in the special schools and classes which have been set up for their particular disabilities.

Our final study sample of 140 students was selected from among 20 schools (Table 2).

The originally planned study sample of 120 was increased to 140 upon recommendation of the Project Coordinating Committee which thought that a substantial turnover would result from frequent dropouts in the " Emotionally Disturbed " group. This category was therefore increased in order to assure the survival of a group amenable to research evaluation at the end of the Project period.

Screening proceeded immediately on the heels of case identification. The process involved a review of school records to assure admission eligibility, conference with school principal and teacher on each case, and an initial contact with the student and a parent to determine interest in the Project. This process frequently required checking and doublechecking of all information sources because of fragmentary or outdated school records.

During this period, it became apparent that the most difficult group to find — meeting our criteria — was the 30 severe cerebral palsied (H.C. 20). The design, calling for a well-defined schedule with set periods of service was exceedingly weakened, with only 9 candidates identified by early November. It was therefore decided not to handle the H.C. 20 students as a *separate* study unit, but to include them in an expanded H.C. (physically handicapped) unit. This was made possible through the cooperation of the Federation of the Handicapped, which was willing and able to make the agency readjustments necessary to serve a larger unit than originally planned.

Other related problems which complicated the intake process resulted from meager or misleading referral data, such as vague medical diagnoses, uncertain intellectual status, and no existing psychiatric evaluation of the " Emotionally Disturbed " group. Also, problems of personal care had to be considered for the physically handicapped group, such as transportation, feeding, incontinence, and others.

Other factors which had an effect upon case selection had to do with such areas as expression of parental cooperation, student interest (admission was voluntary), interest of the school (especially the principal), problems of travel (for physically handicapped) from home to the rehabilitation center.

One further unfortunate result occurred from the distribution of the study sample among so many schools, especially the 30 physically handicapped experimental students who came from 7 different schools. It was considered totally impractical to shift these students into a single class in one school, or even 2 classes in 2 schools. (Later experience with the inter-school mobility of these students confirmed the wisdom of this decision.) This group, then, did not derive the benefits of a single class unit with the same teacher, nor could there be easily effected, through the teacher, the transference of experience from the rehabilitation center to the classroom. However, such transference was more possible in the case of the mentally retarded students and the "600" school students who constituted workable class units and whose teachers were directly and regularly involved in the students' sheltered workshop program.

III. UNIT I – PHYSICALLY HANDICAPPED

Students in this unit were those enrolled in the Board of Education's "Health Conservation" classes (H.C.), severely handicapped by a wide range of orthopedic, cardiac, respiratory, neurological, and neuromuscular conditions. Specifically excluded were the visually handicapped and acoustically handicapped. Altogether, 54 students completed the full five-phase appraisal and were admitted to the program.

A. *Socioeconomic Characteristics*

Information was obtained by a counselor on the project staff, and included an interview with the student, usually in the school. Interviews were also conducted with a parent or other responsible family member, and later supplemented by a home visit.

Information on family income was not obtained since economic need was not a criterion for acceptance. However, an examination of parent's vocational levels (Table 3) reveals that over 50 percent of this group (27) were in the skilled and semiskilled category, and an additional 35.2 percent (19) were in the professional and semiprofessional groups. In the estimate of degree of family disorganization, only 8 families (14.8 percent) were rated as moderate to high; whereas 46 families (85.2 percent) were rated as mild to none. Families in this unit tended to be fairly well educated, middle class, with cohesive family structures.

B. *Medical Characteristics*

The general medical examination was administered to all candidates for the program through the cooperative arrangement and generous assistance of the New York City Department of Health. Recommendations from medical examiners for collateral specialty examinations were implemented in such fields as orthopedic surgery, neurology, ophthalmology, otology, and psychiatry.

Over 300 physically handicapped students were screened in order to select a study sample of 54 students. Students were eliminated, for the most part, who were found by the examining physician to have acute physical conditions not constituting potential serious vocational handicaps. Those finally accepted included such diagnostic conditions as organic heart disease, sickle cell anemia, post-polio, cerebral palsy, asthma, rheumatoid arthritis, epilepsy, muscular dystrophy, brain injury, and various orthopedic disabilities. Students in

Unit I (Physically Handicapped) were graded in two categories (Tables 4 and 5).

Whereas over 85 percent of the students were classified as having " stable " medical or physical conditions, approximately 60 percent were considered by the physician to have a " good " vocational potential — the latter group including some students classified medically as " Deteriorating." It is obviously inadequate to assess vocational potential solely on the basis of current medical status.

A factor which complicates vocational prognostication for a medical examiner is the uncertainty of the medical future of some cases. Some, who are classified today as having a " poor " vocational potential may, in the near future, benefit greatly from anticipated advances in surgery. Therefore, an early program of " vocational readiness " for " guarded " cases may provide large future benefits.

One of the major difficulties encountered, after reviewing the medical histories presented to us from other facilities, is that not nearly enough medical information about these students has been available to those responsible for their care. Clinic records are frequently sketchy and incomplete; most important have been the lack of overall medical supervision and the infrequency of thorough medical review of severely disabled students. For example, one student was admitted to the program with a diagnosis of asthma. Because she seemed not to be displaying any of the expected symptoms, she was examined by our consulting internist. Not only were medical findings negative for asthma or any other disability, the examining physician believed that there had been an absence of asthma for a considerable period of time. It is reasonable to assume that more frequent medical review would relieve cases like this one from inappropriate stigma and prolonged invalidism. These students frequently require (but rarely receive) examinations in the specialized physical or sensory areas.

C. *Service Program for Experimental Students*

1. *Program Setting and Content*

Vocational services for physically handicapped students, including vocational appraisal and reappraisal, were rendered at the Federation of the Handicapped. This agency is one of the largest rehabilitation centers in New York City, with a well-established reputation for service to handicapped persons. " Federation " is a voluntary multi-service agency with a highly competent corps of industrial, professional, and administrative personnel, operating on a budget of over $2 million. Its location, in lower Manhattan on West 14th

Street, has offered easy access to clients and staff alike, and has facilitated the problem of scheduling of students. This was particularly crucial for this group, most of whom had to be transported to " Federation " from their homes in Brooklyn, Manhattan, Bronx, and Queens — many from outlying areas.

Following the five-phase appraisal described earlier, Experimental students attended the Federation 2 days per week and received an array of vocational services while continuing in their regular school classes for the remaining 3 days per week. This service program was carried on for the equivalent of 3 school semesters, February 1963 through June 1964, with the reappraisal taking place during the last semester. In partial preparation for the service program, an evaluation team[1] met first, to review all appraisal data on each case and to decide upon the level of each student's participation in the program. These case conferences served further to enhance interagency coordination and also suggested ways of including in the educational curriculum the development of certain skills which would play a part in the student's vocational orientation. The existence of an excellent sheltered workshop program, with supportive service at Federation, made available to students an exposure to a wide variety of vocational tasks, in addition to an enriching group experience both in the industrial setting and in the counseling situation. Moreover, the workshop offered the opportunity for introducing productive remunerative work to students 15 years of age or over, in accordance with prevailing Federal and State laws and regulations. Our experience has led us to feel strongly about the valuable role of earnings as a motivational force for our students and as a vocational learning factor.

The gamut of services which were made available to our students by Federation of the Handicapped included the following:

a. Vocational exploration in major work areas included various phases of: assembly, packaging, inspection, clerical tasks, clerical machine operating, basic tools, and equipment. This experience was recorded on a comprehensive Work Evaluation Sheet.

The prescription for the work area was set up for each student on the basis of what was learned from the appraisal period, and the suggestions made by the evaluation team at the end of the appraisal period. Consideration was given for students to have service in more than one work area because of the potential for development in several areas; for example, a student may have shown potential both in the clerical and assembly areas. Further evaluation in both these areas was of value in helping the student crystallize a future vocational goal.

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[1] The case evalution team was made up of the student's teacher, Board of Education District Supervisor, Federation of Handicapped's Sheltered Workshop Supervisor and Project Coordinator, and Division of Vocational Rehabilitation's Counselor, Senior Counselor, and Project Director.

In addition to the emphasis on vocational needs, consideration was given to two other factors: In some instances the work area was used to increase the work tolerance of the individual in such major muscle activities as standing; in other instances, the other facilities of the agency were utilized for additional, individual evaluations of the students; for example, if a student had very good eye-hand coordination and did well in the use of the jeweler's pliers, fine soldering, and on the jeweler's lathe, additional work evaluation was done in the Instrument Repair Division, where these skills are being taught on an Industrial training basis.

b. Field trips to industry were a part of the vocational emphasis of the program with the student's teacher directly involved in the trip, whenever possible.

c. Students were exposed to a *paid work experience* in the sheltered workshops, producing, with other clients of the agency, sub-contract items.

d. At times, certain *vocationally-related deficiencies in the student's educational development* were observed, such as in the use of measuring tools — rulers, micrometers — use of fractions, etc.; these deficiencies were pointed out to the teacher who was able to help the student, in the classroom, develop necessary prevocational skills.

e. Inherent in any good prevocational program is the *development of work habits and attitudes.* At the Federation of the Handicapped, this was done through emphasis on punctuality, attendance, the ability to work with co-workers, and the ability to work under supervision. The development of work habits and attitudes was stressed not only in the work setting, but also in school as a further preparation for entrance into the adult world.

f. Group vocational guidance was conducted by the Federation of the Handicapped in cooperation with the Board of Education and the Division of Vocational Rehabilitation.

g. Vocational counseling of the student was conducted as a joint responsibility of both the D.V.R. counselor and the Agency counselor. This was based on early planning and understanding of division of responsibility, in order to avoid confusion for the child.

h. Because of the heterogeneity of disabilities among these students, individual *parent conferences* were conducted by both the D.V.R. and the Federation of the Handicapped counselor.

i. Case Conferences were held frequently with the teacher, the D.V.R. counselor, and the Agency staff in order to discuss change of plans, progress, further planning, and problems still to be resolved for each of the students.

j. Summer programming was conducted to help prepare students for desirable summer activities such as camp, recreation center, travel tours, sheltered workshop activities, etc.

k. Social case work services were provided, as needed.

l. Participating agencies maintained *comprehensive case records* on each student. Progress reports were submitted to the Handicapped Students Research Project for each student, detailing his vocational experience, and evaluating the status of his interpersonal relationship. This report conformed to an outline prepared by the Research Project staff (Appendix C).

The vocational appraisal included evaluation of each student in all of the following seven areas:

1. Testing
   - *a.* Bennett Mechanical — W
   - *b.* Minnesota Paper Form Board
   - *c.* Minnesota Clerical
   - *d.* Purdue Pegboard
   - *e.* Crawford Small Parts
   - *f.* Kuder Interest Test
2. Work Task Evaluation
   - *a.* Clerical — alphabetizing, collating and inserting, typing, adding machine or cash register
   - *b.* Assembly and packaging — plastic collars, pasting, button lace, screw assembly
   - *c.* Hand tools — measurement test, pliers, hammer, saw
3. Machines — home sewing machine, drill press, sander, wood or metal lathe, handsaw
4. Pre- and post-work habits and attitude test
5. Pre- and post-self-image inventories
6. Pre- and post-occupational information test
7. Social relationships

D. *Attendance and Mobility of Experimentals*

An analysis of rehabilitation center attendance records of Experimental students reveals an overall absentee rate of about 17 percent for this group, for the three service semesters. The absentee rate for girls, 23 percent, was more than twice the 11 percent for boys. No explanation is offered for this difference.

One of the unanticipated problems was the mobility of students within the school system during the period of the service program. By November 1963 (the second service semester) some 20 students had been transferred from their original schools to 11 different high schools and 1 junior high school. These included both Experimental and Comparison students; in some cases, but not all, it was possible to arrange for the continuation of Experimental students in the program. This shift of students was beyond the Project's control and was undoubtedly in the best educational interest of the students involved. However, it was not in strict conformity with the Project as originally designed and it resulted, further, in multiplying the administrative responsibilities far beyond what was originally anticipated.

E. *A Particular Case Experience*

While statistical evaluation of vocational experiences are described elsewhere in this report, it may be of interest to examine a specific case which is illustrative of the qualitative values which were experienced by a substantial number of students in this Unit.

Case A.B. — Boy diagnosed as " neurofibromatosis and scoliosis " since age 1. Family of four siblings; father a die-caster, one brother is an engineer. Family occupies a four-room apartment of a two-family home; client shares a room with father and mother.

At the initial interview, September 1962, the counselor found the family to be cooperative and interested in client's activities and in the program. The psychologist described the client at this time as " a dependent person who appears depressed and perceives the world as a hostile place." The D.V.R. counselor predicted that A.B. would benefit from the program, and he was placed in the experimental group where he received three semesters of the vocationally-oriented program described earlier. In addition to vocational and sheltered workshop activities, the program included field trips to industrial settings, conferences with members, and remedial reading.

By the time of the reappraisal in June 1964, client had made significant progress, beyond what might be attributed to the effects of normal maturation. For example, the psychological test scores showed marked changes upward as follows:

	1962	1964
W.I.S.C.	(Dull Normal)	(Superior)
Verbal	94	125
Performance	83	110
Full-Scale	88	120
Reading grade	5.2	6.8
Arithmetic	5.2	5.5

Other, more subtle, outcomes of the 2-year experience occurred in 2 areas, self-image and counselor perception. In June 1964, the psychologist reported that " A.B. has learned to suppress his hostile and aggressive feelings." On the other hand, whereas the counselor, in 1962, had recommended that client be prepared for " continued education," by 1964 this judgment was modified to a recommendation for " vocational training in a specific trade." This conclusion was based in great part on the limited progress made by client during these two years in reading and arithmetic. In confirmation of the validity of this judgment, when client was interviewed for the followup one year later, 1965, and was asked by the counselor, " What kind of job would you like to have?" he replied, " I.B.M. machine operator; I found this the most interesting work at Federation of the Handicapped." He stated further that he planned to go on to business school. The counselor reported that:

" A.B. is well-poised and relaxed. He is happy to be attending high school and is aware that his own effort will pave the way to graduation. He is interested in many areas and responds with enthusiasm. He is concerned about employment and asked many questions about D.V.R. counseling, training, and Civil Service."

Certainly for this student, as for some others in the program like him, early concentrated attention to, and assessment of his capacities, enabled the client and his family to develop a more realistic estimate of his potentiality and to chart an appropriate vocational course. At age 16 he has been able to discard previously-held inappropriate vocational aspirations and, subsequently, to gear his educational planning to vocational goals which he, himself, accepts as realistic and realizable. The 2-year experience has helped A.B. to crystallize insights, formulate reasonable life objectives, and strengthen his perception of others. As such, he stands as an illustration of several like him who have succeeded in fulfilling the basic objectives of the project.

F. *Quantitative Findings*

The staff is interested in various issues arising from intergroup comparisons (E's versus C's) on the standardized tests and rating scales used in the Study. In order to determine what effects the training program had, answers are needed to two questions: (1) were the E's and C's drawn from the same reference population, i.e., were the differences between the two groups insignificant at appraisal; (2) were three significant differences between E's and C's at the end of the study, i.e., were there differences at (a) reappraisal and (b) followup.

In examining the data, it must be kept in mind that the relevant comparisons are based on comparatively small sample-sizes. In order to provide a meaningful statistic, a subject had to be available both for initial appraisal and for reappraisal 18 months later. In addition, he had to be interviewed in followup after an additional interval of 12 months. Within these restrictions, the various tests for the Unit I E's range from sample sizes of 25 to 27; those for C's range from 17 to 24. Since the project has a replication feature which provides that additional samples of comparable students will be studied in a second 2-year period, it would be wise to consider the present findings as tentative.

1. *The Testing Data*

It will be noted (Table 6) that on initial appraisal both E's and C's were educationally retarded and also were below the "normal" I.Q. range (for unselected school children, the mean will be close to 100). Second, it appears that E's made considerable gains, from appraisal to reappraisal, in I.Q., while the C's gained less.[2] A similar difference, but less marked, is evident in connection with the school achievement tests. While a portion of these gains may reflect the results of practice as well as ordinary maturation, it would appear that there is a trend for E's to show greater progress than C's. Interestingly, E's had lower test scores than C's at appraisal, but were generally slightly higher at reappraisal. All of these results must be interpreted with caution. However, it should be noted that all of the gains made by E's met the test of satistical significance ($p < .05$), while none of those made by C's met this test.

2. *The Rating Scale Data*

Multi-item rating scales (Appendix B) were developed for use by the various professionals concerned, both at appraisal and reappraisal. In each scale, some items were specific to the special field of knowledge of the particular professional and some items were common to all the scales. The items were of the Likert type, with 4 scale-steps, ranging from " adequate " to " inadequate." Subjects could obtain a maximum score of 75 (good adjustment, high potential) and a minimum score of zero (poor adjustment, poor potential). For ease in computation, each item, a group of items, or an entire scale, can all be scored in the range from 0–75. The reliability of the scales cannot be reported, since there was no provision for repeated scaling of individual clients by two or more judges, except across the very large appraisal-reappraisal interval.

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[2] Appendix D-1 and D-2.

Tables 7 through 11 present summaries of changes in rating scale scores, by professional doing the rating, by total scale scores, and by certain selected items, from appraisal to reappraisal.

Table 7 indicates that one of the four professionals involved (the consulting psychologist) rated the E group as generally better adjusted after training than before, but found the C's slightly less well adjusted. The counselor-evaluator at the service agency found both groups improved, with no significant difference between C's and E's. The D.V.R. counselor found the E's slightly improved and the C's slightly less well adjusted. The teacher found no significant change in either group.

Table 8 displays the same data in terms of a numerical count of *individuals* within groups E and C who showed increments, decrements, and no change from appraisal to reappraisal. It will be seen that the D.V.R. counselor and the psychologist rate the majority of E's as improved and the majority of C's as showing decrements in scale score. The agency counselor finds improvements in the majority, both E's and C's, with the teachers reporting virtually an even split in both groups.

Tables 9, 10, and 11 focus on three items of the scales that deal with employability: potential of being placed in employment, ability to maintain employment once it is found, and the realism of occupational expectations. It is interesting that none of the professionals (Table 9) find that training has improved the client's placeability, but there is general agreement (Table 10), except for the teachers, that training has made the E's better able to maintain employment, as compared to C's, assuming that a job can be found. Estimates of professionals on occupational expectations are sharply divided (Table 11) both within E's and C's as well as between the two groups. In sum, the E clients seem better able to adapt to work as a result of their training experience, but are also quite difficult to place. Generally, the teacher apparently has no adequate data to make a judgment.

While these items appeared only on the Psychologist's Scale, it is worth noting that the psychologist saw the E's as having made notable gains from appraisal to reappraisal in ability to profit from training, in overall emotional adjustment, and in a more positive relation to parents and familial peers. No such gains were reported by the psychologist for the C's.

3. *Followup Data*

Fifty-two physically handicapped students were included in the one-year followup: 27 Experimentals and 25 Comparisons. A variety of efforts had to be employed in order to reach clients for a direct personal interview, with a substantially greater effort required to reach the Comparison group (Table 12).

Collateral contacts became the most essential and effective means of achieving contact. They included such sources as: court or prison, neighbor, relative, employer, social agency, clergy, school, local utility companies, Department of Welfare, and many hospitals.

One year after the conclusion of training, followup found the bulk of E's and C's still attending school. No comparative estimate could be made, therefore, of their relative ability to compete in the labor market. The followup interviews were, however, quite comprehensive, covering a number of areas of personal, social, and educational adjustment, as well as the attitudes of the subject to family and occupation.

Generally, E's were not found to differ from C's on most of the items summarized in the Followup Schedule (Appendix A). Differences favoring E's were found on 5 of the 65 followup items. More E's than C's expressed content with their present living arrangements; more E's than C's were judged as having realistic occupational aspirations; E's appeared more strongly motivated for employment; more E's than C's expressed a strong desire for vocational training. It would appear, therefore, that training services offered in this project have had some positive effects but, since these students are still attending school, their general life situation has tended to remain unchanged.

IV. UNIT II — MENTALLY RETARDED

Students in this unit were selected from those enrolled in the Board of Education's C.R.M.D. classes (Children with Retarded Mental Development), which are distributed among a number of regular public schools. Students selected for the study sample were those . . . .

"Who, in addition to their learning difficulties, have severe problems of social or personal adjustments which affect their potential for benefiting from existing programs. All those enrolled in these (C.R.M.D.) classes have been examined by the Bureau of Child Guidance and classified as 'mentally deficient', I.Q. distribution limited to the 50–75 range, including all those classified as educable."[3]

A. *Socioeconomic Characteristics*

Although good cooperation was obtained in the response of these students and their families, interviewers noted a high incidence of mental retardation among parents and siblings. Program interpretation therefore required painstaking efforts in order to ensure student involvement and family understanding. A review of the breadwinner's vocational status indicated that of the 34 families, 3 (8.8 percent) were in the professional or white-collar group; 13 (38.2 percent) were in the manual skilled or semiskilled group; and 18 (53.0 percent) were in the unskilled group (Table 13).

A large majority of these families fell into the unskilled or semiskilled category. Case records also indicate an extremely low level of educational completion among these families. An analysis of the interviewer's estimate of family disorganization (Table 14) indicates that 12 families (35.3 percent) were rated "high" to "moderate," whereas 22 families (64.7 percent) were "mild" or "not."

The combination of a pattern of significant family disorganization and marginal economic status created a group of families with whom communication was problemmatical. Even with the most intensive professional efforts, family involvement was far from adequate, thereby contributing markedly to the poor showings of a substantial number of students. Similarly, efforts to conduct group counseling sessions with family members met with little success; very few families ever got to the group session. Family counseling, therefore, leaned heavily on the one-to-one relationship, sometimes at school, but frequently in the client's home.

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[3] Selection criterion defined in the Project protocol, prepared in collaboration with personnel from the N.Y.C. Board of Education.

B. *Medical Characteristics*

The general medical examination revealed no significant deviations from normal patterns for youngsters of this age group.

Because of the nature of this particular disability, mental retardation, it was decided to conduct neurological and ophthalmological examinations. Because of difficulty in reaching all students (particularly the Comparisons) only 24 of the 34 in the sample were examined neurologically (Table 15).

Only 5 students out of 24 manifested " normal neurological development "; an equal number showed clear neurological evidence of brain damage. The bulk of the group, 58 percent, presented symptoms indicative of an underdeveloped nervous system, one of the most significant symptoms being the high percentage (63 percent), of abnormal eye movements. Eye examinations revealed the need for a variety of corrective interventions in a large number of cases. Hearing examinations were not conducted although we recognized the significance of acoustical loss in mental retardation. Unfortunately, study limitations of time and other resources did not permit examinations in this area. In general, this group of " mentally retarded " students was found to possess marked cultural differences, serious language deficits, symptoms of neurological "abnormality," and serious sensory defects, particularly in the visual area.

It has also been observed that examiners from different professional disciplines will differ in their independent assessment of the capacity and potential of the same client.[4] Therefore, the question being begged by these findings is whether current objective measures of intelligence are truly indicative of the intellectual capacity of these youngsters, or are really reflecting deficiencies in sensory and other areas. Many mentally retarded students in this sample were found to have last been tested by the Board of Education for intellectual functioning from 6 to 10 years previously; there apparently had been no objective assessment of their intelligence in the intervening period. In many cases, the study's examination results showed marked variance from those reported in the school records. Psychological examinations were conducted for the project by the staff of a highly reputable clinic for the mentally retarded with an outstanding reputation in the field.[5] All students received the following tests: WISC;

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[4] Klapper, Morris — "Disciplines Vary in Vocational Evaluation," in *Rehabilitation Record,* V. 6, no. 4, July–Aug. 1965, p. 22–25.

[5] N.Y. Medical College, Div. of Psychology (Dept. of Pediatrics), Harold Michal-Smith, Ph.D., Director.

WRAT (Reading and Arithmetic); figure drawings (draw a person, draw a person of opposite sex, draw self); Thematic Aperception Test; Rorschach. The examining psychologist also completed a comprehensive clinical evaluation of the student's personality structure. In many cases thus tested in the initial evaluation, levels of intelligence measured significantly higher (sometimes as much as 20 points) than those reported in school records. Similarly, reading and arithmetic levels were frequently found to be much lower than students' intellectual levels would warrant. The significance of this finding for vocational planning is fairly obvious, for without appropriate language skills, vocational adjustment and vocational learning are likewise hampered and retarded.

In the subsequent reappraisal, both Comparisons and Experimentals displayed further consistent increases in all phases of psychological test scores. Charts A and B depict WISC full-scale scores of both Experimental and Comparison groups; from appraisal to reappraisal, one Comparison rose as much as 24 points, and one Experimental rose 18 points.

CHART A

Study Group I — Unit II, Experimental
Changes in Psychological Full Scale Scores (WISC)
From Appraisal to Reappraisal, 1962–64

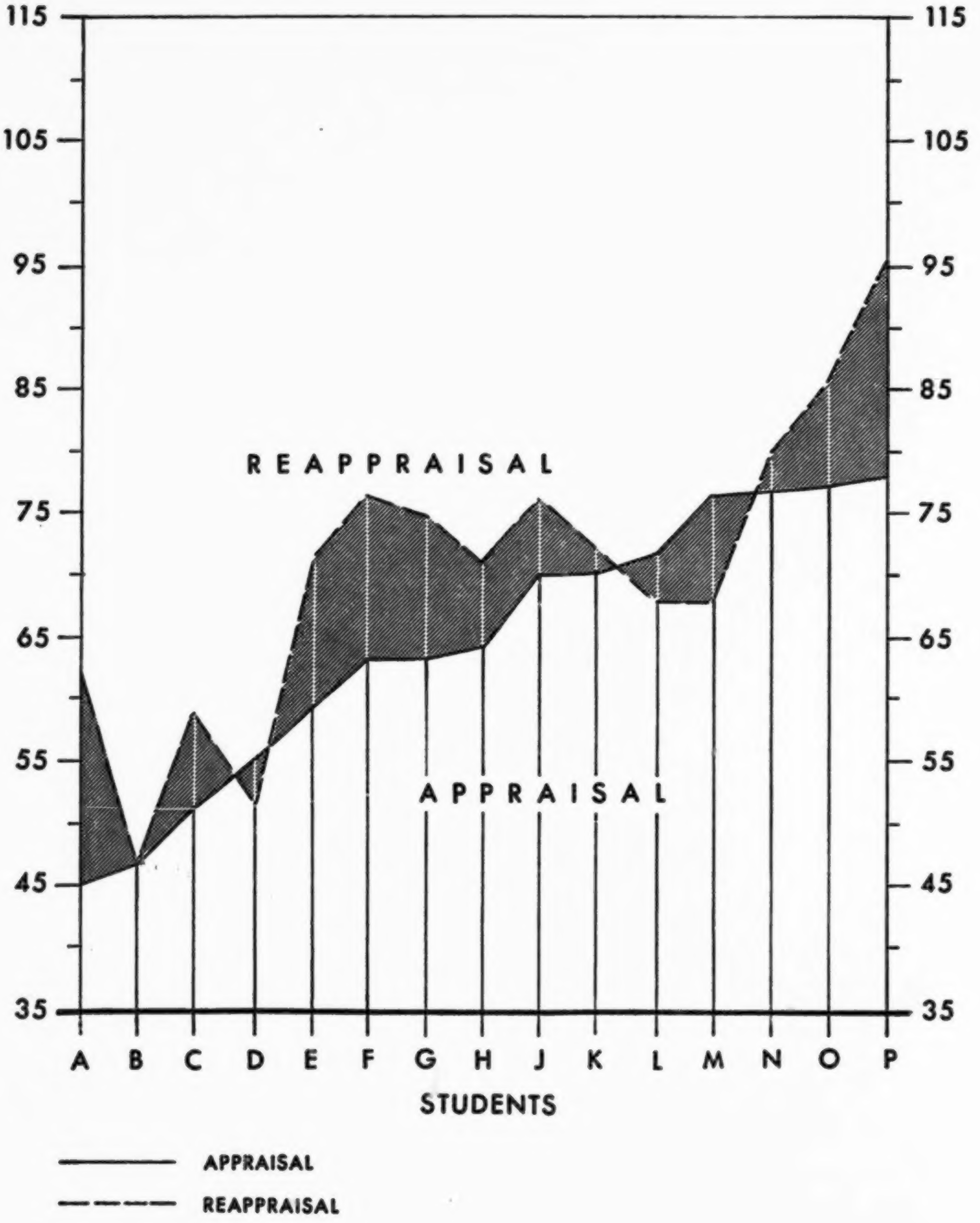
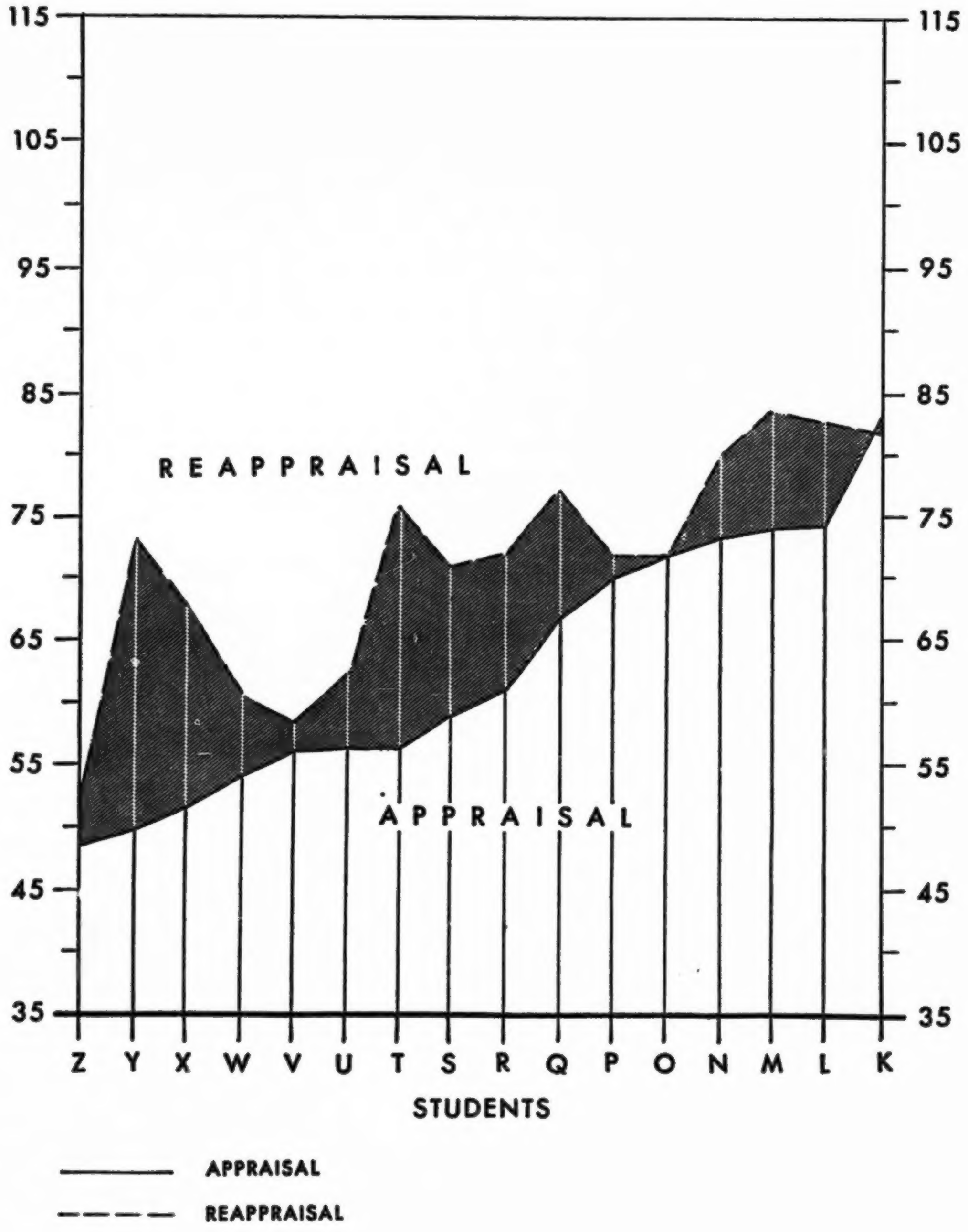


CHART B

Study Group I — Unit II, Comparison
Changes in Psychological Full Scale Scores (WISC)
From Appraisal to Reappraisal, 1962–64



C. *Service Program for Experimentals*

The Training Center and Workshop of the N.Y.C. Association for the Help of Retarded Children conducted the vocational appraisal and reappraisal and provided the two-year program of vocational services for the Experimental students. A program of services, worked out between the project staff and the A.H.R.C. staff, was in keeping with the project's objectives and attuned to the public school schedule and curriculum. The location of the A.H.R.C. Training Center on Second Avenue near 22d Street makes it easily accessible. This was a particularly important consideration since one of the elements in the program included training in independent travel.

The range of vocational services offered to Experimental students by A.H.R.C. included the following:

a. Vocational exploration: extension of exploration of those potentials suggested by the appraisal. Use was made of the variety of processes in the sheltered workshop structure of A.H.R.C., as well as by assignments to selected clerical and maintenance aspects. These assignments were on both simulated and sub-contract levels. An earnings arrangement was worked out for sub-contract work performed by students age 15 and above. Students were also trained in procedures for securing working papers and social security cards.

b. Exposure to industry through directed individual and group sessions, as well as by structured field trips to a variety of industrial or commercial settings.

c. Individual and group counseling on a planned basis by both A.H.R.C. and D.V.R. Project Staff.

d. Training in the development of such sound work habits as: attendance, punctuality, neatness, grooming, attention span, industriousness, ability to work under supervision, etc.

e. Development of increased work tolerance.

f. Work with parent and student to develop the latter's self-sufficiency in such areas as independent travel, performing household chores, handling money, relating to peers and peer groups, etc.

g. Planned case conferences, at appropriate times, among representatives of collaborating agencies.

h. Programming to help prepare students for such desirable summer activities as camp, recreation centers, travel tours, sheltered workshop activities, etc.

i. Use of social case work services, as indicated.

j. Maintenance by participating agencies of comprehensive records and the preparation of necessary reports, as required.

Attendance experience at the rehabilitation center was quite good, the absentee rate being only 7 percent. Students' stability was enhanced by the fact that they did not experience significant shifts from their original school assignment.

D. *A Particular Case Experience*

The following case is typical of a number of Experimental students who seem to have benefited directly from the project's program, but whose progress cannot obviously be reflected clearly within the overall statistical analysis. It is presented to illustrate specific qualitative changes which were observable and thought to be a direct result of the various activities in the vocational program.

Case of C.D.

When first seen in the fall of 1962, client was depicted by the D.V.R. counselor as seeming "to have very little motivation for anything and seems to be content to drift along with the tide. She obviously has no responsibility for planning for herself and it is felt that it would take a great deal of counseling to build up responsibility for herself."

Client and her younger sister share a bedroom in a five-room apartment, which is also occupied by the mother, an aunt, and a male cousin. Her mother and father have been separated for several years and she does not see the father. Client appears to be well cared for and mother shows interest in planning for her. The family is supported by the Welfare Department.

In the initial evaluation which took place upon admission to the program, all examiners' expectations of client's vocational potential were extremely low (Table 16).

During the interval between appraisal and reappraisal, client was actively involved in the vocational service program at A.H.R.C. Training Center where she was exposed to the full gamut of services described earlier. Major concentration was placed on regularly planned intensive vocational counseling aimed at strengthening self-image, as well as improving peer-group relationships.

A brief excerpt from the vocational summary seems to highlight the progress of client over this two-year period: The initial vocational appraisal, 1962, had "found client to have training problems in work discipline in relationship with supervisors, peers, and work skills." Contrasted with this, the 1964 reappraisal found her "to be a very willing worker who has good hand dexterity and catches on to new things quickly. The prognosis for employment appears to be good."

When contacted one year later, 1965, as part of our followup procedure, client was found to be employed at the A.H.R.C. workshop. Here she was in sub-contract assembly work and earning $20 to $22 per week. The counselor reported that client " is doing very well and expects wage increases when she is doing floor work. She also likes being there very much. She feels she has enough to do so she sees her boy friend every night and also helps with the housework."

E. *Quantitative Findings*

The initial sizes of Experimentals (E's) and Comparisons (C's) within Unit II were 16 and 19, respectively. All but one of the E's and three of the C's were available for psychological testing at reappraisal 18 months later, and were also reassessed on the Rating Scales by the Project Counselor, the Teacher, and the Consulting Psychologist. However, only 7 of the 19 C's were available for the extended vocational re-evaluation by the service agency. The chief reason for this failure to return was that a number of *N's* in the Comparison group had already left school at the time of Reappraisal. However, 18 of the original 19 C's and 14 of the E's were interviewed in the followup, approximately 30 months after first contact.

In examining the quantitative findings, therefore, we must repeat the *caveat* that the *N's* involved are quite small and the application of rigorous statistical tests would be a pointless exercise. For the purpose of this *interim* report, we shall examine the data for trends, rather than for statistically significant differences.

1. *The Psychological Testing Data*

In general, it is clear from Table 17 that there is no trend for E's to gain more in I.Q. and/or school achievement than did C's, from test to retest. If anything, C's appear to register a larger improvement in Performance I.Q., although the small *N* permits the possibility that this is a statistical artifact. In any event, there is no indication of relative superiority of E's over C's, at least as this may be reflected by scores on psychological tests. The very moderate gains achieved by both groups could very well have taken place as a function of ordinary maturation and the effects of practice.

2. *The Rating Scale Data*

Tables 18 through 22 present summaries of changes in rating scale scores, by professional doing the rating, by total scale scores, and by certain selected items, from appraisal to reappraisal.

Tables 18 and 19 indicate that none of the professionals who compared E's and C's at appraisal and reappraisal were able to find significant differences between the groups as a result of the 18-month training period. Both E's and C's show very small gains and/or losses from appraisal to reappraisal. As in the case of the psychological testing data, the influence of training was not reflected in total rating scale scores.

Tables 20, 21, and 22 focus on various aspects of employability. Again, the differences between E's and C's are insignificant, with the exception of one datum: The service agency's counselor felt that E's had improved significantly in placeability as a result of the 18-month training experience, while no such gains were reported at reappraisal for C's. No other differences between the groups were observed, on items which appeared in three or more scales.

It might be worth noting that, in general, the teacher was the most negative of the four professionals reporting, and the psychologist most positive. Since actual behavioral changes appear to have been minimal, it is likely that these differences represent merely differences in general attitude on the part of the professional concerned.

3. *Followup Data*

Thirty-five students, 16 Experimental and 19 Comparison, were in the original sample, for which information was obtained on the basis of 133 different contacts (Table 23).

Collateral contacts were a major source both of locating clients and of securing essential information. Such sources included: court or prison, neighbor, relative, employer, social agency, clergy, school, local utility companies, Department of Welfare, and Department of Hospitals. Of the 35 students, 1 was deceased.

Followup interviews were successfully carried out with 14 of the original 16 E's and 18 of the original 19 C's, 12 months after reappraisal.

In some contrast to Unit I, one-half of the Unit II students had left school by the time of the followup period (6 of 14 E's and 10 of 18 C's). It is not easy, however, to find any clearly marked differences between the labor force experiences of Unit II E's and C's. Generally, neither subgroup was able to obtain and keep regular jobs in the unprotected labor market during the 12-month followup period. However, the two subgroups differed in the *quality* of their work experiences during the year, as follows:

First, only 1 of the 6 E's reported *no* work experience at all, while this was true of 5 of the 10 C's who had left school. Second, while none of the 6 E's had found regular employment in the open labor market, 4 were involved in various kinds of sheltered employment (workshops, Job Corps, etc.); no C's reported such involvement. Third, E's were more active in seeking employment than C's. On the other hand, 2 of 10 C's had found regular employment, 1 for only 2 months and 1 for over 12 months on a part-time basis. It seems plausible to conclude that the 12-month period since reappraisal is too short a time to permit adequate comparisons.

Examination of the followup data in areas other than the vocational (social, personal, and school adjustment) reveals a few additional differences between C's and E's. First, C's appear to be much more socially isolated than E's. Second, E's impressed the interviewer as being more strongly motivated for work and more eager for job training than were C's as a group. On the other hand, the two subgroups do not differ in their generally positive attitude to their home lives, nor in their generally negative attitude to school.

On the whole, the training program in the service agency appears to have had the effect of making the E's more positive toward employment, more active in seeking it, and more responsive to further job training. The service agency experience appears also to have had a positive effect on the retardate's personal and social adjustment. It is too early to tell, however, if the work-training experience offered by the service agency will have a long-run positive influence on the actual employability of this group of socially underprivileged and intellectually limited youngsters.

V. UNIT III – " EMOTIONALLY DISTURBED " (SOCIALLY MALADJUSTED)

Students in this Unit were selected from the " 600 " schools which are administered by the Board of Education's Bureau for Socially Maladjusted Children. Students are transferred to " 600 " schools from their regular schools because they have manifested overt behavior considered by the teacher to be unmanageable and/or disruptive to the rest of the class. Students from " 600 " schools were included in this Study because " school counselors firmly believe that a sound program of vocational rehabilitation would greatly reduce vocational failures and save the community considerable sums expended for custodial care in State training schools."[6]

Fifty students were included in this sample; 25 boys from two " 600 " schools and 25 girls from another " 600 " school. Their participation was on a voluntary basis, within the limits of the admission criteria, after due interpretation of the program was offered by the counselor to prospective candidates and their families. A student could elect to reject admission to the program; in some instances a parent made such decision, despite all efforts at program interpretation by the D.V.R. counselor and school authorities.

A. *Socioeconomic Characteristics*

The 50 students selected for this group reflected the general pattern of the population of the " 600 " schools; that is, predominantly non-white and, usually, part of a dislocated family unit with severe economic, educational, and health problems. Only 8 percent of these families are in the professional or white-collar occupations, whereas 50 percent are in manual trades, and 42 percent in unskilled occupations. Moreover, almost half of these families, 44 percent, were considered to fall into the " high to moderate " classification of family disorganization. The social histories of these students reflect characteristic reactions to their perception of a world of harshness, deprivation, and negation. They place little credence in the stability and integrity of the adult world, especially their parental world, and therefore reject adult authority. Rejection is thus countered by rejection. In dealing with these students the project staff played down its authoritative role, insofar as possible. Acting-out behavior, when it occurred, was seen by the counselor as a testing-out device by the student, and was handled on that basis in a counseling setting. Students were treated as mature teenagers, not as children, and every effort was made to transmit to students a feeling of the staff's genuine interest and concern in their problems, their welfare, and their future.

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[6] Project Plan, p. 6.

A student is referred to the "600" schools upon recommendation of his "regular" school teacher because of an overt act, real or threatened. Obviously, such acts or incidents will be handled differently by different teachers. It seems clear from an examination of case records that, in many cases, it may have been possible to handle behavior problems in regular school in such a manner as not to require students' suspension and transfer to the "600" schools. The intervention of immediate and adequate counseling and guidance, with attention paid to underlying social problems and needs, could assuredly have had a marked positive effect on such students' school adjustment.

Because the social environment of these youngsters, with the impact of its numerous social variables, remains relatively constant, there is serious question about the counteracting effect of our Project.

The 14- to 16-year-old student in the "600" school is emotionally scarred, materially in need, completely impatient with and mistrustful of authority, traumatized by broken promises and broken homes, and thoroughly pessimistic and cynical about the future. Prevocational preparation is for him a strange sophisticated concept which has little significance either in theory or practice. Only a job and high earnings have tangible meaning, and many "600" school students withdraw from school long before the permissible age, as much because of their drive for remunerative employment as for their distaste for school. In this respect, our program can be said to have provided a paid work experience for the Experimental students, resulting in a staying power which kept them in school long after their Comparison peers had dropped out. The program thereby provided a school dropout preventative as well as a vocational orientation.

The strong pull towards work and income was noted more distinctly just about the first year our program got under way, 1962–63. This was a period of growing civil rights movements, the development of poverty panaceas, a clamor for educational upgrading of the under-achievers, and the creation of a constellation of various job programs aimed at reaching our "lost" youth. Poverty programs, job opportunity centers, work-study programs, and others evolved quickly enough to have an immediate competitive effect upon our students, particularly since some programs paid students on jobs considerably more than our students could earn in our sheltered workshop program. The result was a straining of our students toward such programs with higher paying jobs. Indeed, it seemed at times as if the various job programs were operating at cross-purposes to one another. At the very least, this situation taxed the professional skills and resources of our staff in attempting to maintain students' continued interest and participation in the project. Certainly it was a clear indication of the meaning which money and immediate high reward had for our students.

B. *Medical Characteristics*

In addition to the general medical examination, all students in this unit received a psychiatric examination as part of the screening process. Later, all Experimental students and 15 Comparison students were examined neurologically. (Ten Comparison students could not be recaptured for neurological examination.) Although psychiatric findings were completely negative for any major disorders, there was considerable evidence of neurological impairment or underdevelopment (Table 24), 6 students showing objective findings indicative of some nervous system damage.

In a comparative study of examinations of the "600" school students (Unit III), and the mentally retarded students (Unit II), the examining neurologist felt that "the number of abnormalities for a group designated as behaviorally disturbed was higher than would be expected. Within these two groups of students, who differed in respect to behavior and intelligence, one should look closely at the common factor of learning retardation as showing possible correlation with the finding of a high number of neurological deviations common to both groups."[7]

In addition to the more frequent neurological findings of "abnormality of eye movements," other significant findings included such as:

a. difficulty with finger localization
b. reversal of right and left for environment
c. physical stigmata
d. deviation of postural organization
e. disturbance of distal movements
f. kinesthesia abnormality

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[7] Appendix E. David Biser, M.D. — unpublished report "Evaluation of Nervous System in Mentally Retarded and '600' School Students in the Project," 1963.

Consequently, the examining neurologist postulates that " the nervous system cannot be viewed simply in terms of whether or not the student shows brain damage. The nervous system evaluation, especially if done in the early years, may be a help in deciding the educational approach to the individual child. It is suggested that the classifications of behavior disturbance and mentally retarded, in many instances, simply express a symptom, and that classification of these children by an overt symptom imposes limitations on a proper educational approach for the individual child." (Appendix E)

It is perhaps not surprising, therefore, that the report on school desegregation[8] issued by New York State Education Commissioner James E. Allen, Jr., on May 8, 1964, found that " few objective data are available on the programs of the special schools but, what evidence we do have suggests that these schools, particularly the " 600 " schools, have grown at a rapid pace in recent years. The functions they are designed to serve remain vague. We could find, for example, no clear statement of the present curriculum for these schools, and the available data indicate a disproportionate number of minority group students in these schools."

In the light of the observations contained in the " Allen Report " urging a refinement of educational curriculum in the " 600 " schools in recognition of the very special needs of their students, the suggestions of our study's examining Neurologist take on added significance. They illuminate a serious weakness in the service aspect of our research design since we had based our structure on the presumption of the existence of a well-organized, all-encompassing educational program; a program which was cognizant of and sensitive to the special needs of these students, and was ready to provide for these needs either directly or indirectly. However, both the Allen report and the project's experiences have served to confirm the presumptuousness of this premise. In the project's experience, the school's lack of attention and followup on critical medical problems; the school's failure to follow up students who drop out or are absent for extended periods; the paucity and inadequacy of school guidance services; the school's failure to provide adequately such admittedly vital services as intensive remedial reading are a few illustrations of a pattern of problems which can hardly permit harboring high educational or vocational expectations of the

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[8] " Desegregating the Public Schools of New York City " — A report prepared for the Board of Education of the City of New York by the State Education Commissioner's Advisory Committee on Human Relations and Community Tensions, May 12, 1964.

" 600 " school students. How does one teach and vocationally train a student who is beset with psycho-social problems involving his family and his community; whose teeth hurt or are missing; whose stomach is hungry and whose body has other physical ailments; who cannot read anywhere near the level permitted by his intellectual capacity — how can such a student be taught without providing first for those basic needs which are fundamental to successful achievement? In partial recognition of this fundamental problem, the Superintendent of Schools, Dr. Bernard E. Donovan, announced in September 1965, the inauguration of a comprehensive plan to remedy the deficiencies in language skills, especially reading, of public school students of New York City. This program would " give an intensified program of direct instruction in reading and related subjects to pupils not reading up to grade level, *using up to 40 percent of the school day for this work.*" We endorse the emphasis placed by Dr. Donovan on reading competence, for the project experience of " 600 " school students confirms his observation that " only frustration and despair can result if we start children on the acquisition of more advanced areas of knowledge before they master the basic tools for handling it."[9]

C. *Service Program for Experimentals*

The evaluative and ongoing vocational services for students in this Unit were provided by the Federation Employment and Guidance Service (F.E.G.S.), an agency with a long and successful experience in the vocational field, which includes work with clients manifesting a variety of behavior disorders. The location of F.E.G.S., particularly its sheltered workshop at 14th Street and 6th Avenue, placed it ideally at a major transportation crossroads of New York City. Moreover, its physical proximity to the D.V.R. office contributed greatly to interagency communication on a person-to-person basis. Also, the workshop is about 1 mile from the girls' school, and about 2 miles from one of the boys' schools, thus avoiding what could have been a serious travel problem in a city like New York. Several male students came from a school in Brooklyn, and the additional travel problem noticeably affected their punctuality and attendance.

The vocational appraisal at F.E.G.S. consisted of three major elements:[10]

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[9] Report from the Supt. of Schools, Dr. Bernard E. Donovan. " Focus on Fundamentals," presented to the Board of Education on September 8, 1965, and printed in the Staff Bulletin, Public Schools of N.Y.C., October 4, 1965.

[10] This description of appraisal elements taken from a report prepared by F.E.G.S.

First — Work sessions on simulated items which actually duplicated what is done in industry, such as assembling key chains, packaging hardware and toys, simple electrical wiring, collating, and filing. These items were not involved in commerce. While this was simulated work, it did provide a reasonably realistic work setting. In the work stiuation, it was possible to observe the student's ability to follow instructions, his acceptance of supervision, how he got along with co-workers, the quality and quantity of his production related to industrial norms on the same items, etc.

Second — Manual and clerical testing was administered to determine the student's ability and potential in these areas. These tests, administered by F.E.G.S. staff, included the following:

Minnesota Paper Form Board
Minnesota Clerical
O'Connor Finger Dexterity
Minnesota Rate of Manipulation Board
Minnesota Spatial Relations Board A & B

Third — Individual counseling interviews were conducted with each client during the appraisal period to determine vocational interests, vocational self-concept, and reality of vocational plans.

The vocational appraisal was thus designed to achieve an impression and some estimate of students' assets and liabilities. In addition, the evaluator was asked to complete a vocational rating scale which, among other things, carried his estimate of the student's vocational potential. Following an initial interview of both the student and a responsible guardian, the vocational appraisal was conducted at the F.E.G.S. workshop over a period of several weeks, and resulted in a comprehensive report on such facets of the student's performance as: punctuality and attendance, travel competence, attention span, peer relationships, gross and fine manual dexterity, sustaining work, learning ability, acceptance of work environment.

Following the total appraisal evaluation in the fall of 1962, 25 Experimental students were selected from the sample of 50 who had been evaluated, and they began their 3-semester service program in February 1963, ending in June 1964. A range of vocational services was offered Experimental students:

a. Vocational exploration; extended exploration of potentials indicated in the appraisal. Use was made of a variety of processes in the sheltered workshop structure, in addition to assignments to selected clerical and maintenance tasks, both on simulated and subcontract basis. Students undertook various assembly, collating, and related tasks, and an earnings scale was arranged for all subcontract work.

b. A knowledge of industry, and exposure to its settings through individual and group sessions, as well as by structured field trips to industrial and commercial sites.

c. Individual and group vocational counseling, in collaboration with D.V.R. rehabilitation counselor.

d. Parent counseling on individual basis. Efforts at group counseling did not succeed because of parents' attendance problems. Smallness of group and lack of continuity forced early discontinuation of this effort.

e. Inculcation of such sound work habits as: regular attendance and punctuality, good grooming, maintenance of attention span, ability to understand and follow oral and written instructions, capacity to work under supervision, acquisition of a pattern of work neatness, etc.

f. Development of work tolerance.

g. Assisting parents and students toward development of latter's self-proficiency in such areas as independent travel, performing household chores, handling spending money, relating to peers and peer groups, etc.

h. Interagency case conferences on a regular, planned basis.

i. Programming to help prepare students for such desirable summer activities as camp, recreation center, travel tours, sheltered workshop activities, and jobs.

j. Social case work services.

k. Monthly interagency staff conferences with a consulting psychiatrist to review special problems of policy or those involving specific clients.

Following the first semester of the program, several additional prevocational training areas were introduced, although these were not necessarily aimed at job placement at completion of the program. They included:

(1) Garment packaging: Cooperation of a union and a large employer in this area were secured; one of the union persons offered to serve as an instructor of staff and students.

(2) Small electrical appliance repair: one of the largest appliance repair shops in New York City offered to train one of the sheltered workshop foremen sufficiently to enable him to train students. This firm was also considered to be a potential job resource to students showing sufficient ability and interest in this work.

(3) Grocery checking: training was provided in simulated supermarket checkout work, through use of a variety of grocery items, stage money, cash register, grocery carts, counters, etc. Prices on items were changed regularly to coincide with actual supermarket practice.

(4) Selected business machine operation: including mimeograph, photostat, addressograph, and adding machine.

One of the several interesting features of the service program developed by F.E.G.S. was the group guidance sessions. The focus was on student participation in discussion rather than dependence on counselor lectures. Most of the students had several mock employment interviews, with counselor serving as interviewer. A tape recorder was used during these interviews, and the playbacks were used as a teaching and guidance device. Some of the many topics discussed during the group sessions were:

1. Traveling
2. Grooming and attire
3. Need to work
4. Behavior on job
5. Occupational information
6. Social Security
7. Income taxes
8. Child labor laws
9. Entry jobs
10. Application blanks
11. Safety on jobs
12. Getting along with coworkers
13. Use of telephone
14. Source of employment
15. Unions
16. Employment agencies
17. Job interviews
18. References

D. *Attendance and Mobility of Experimentals*

At the outset, poor attendance, withdrawals from program, sharp fluctuations in student participation, and a high rate of mobility were all predicted for this group. Experience confirmed the validity of these expectations. As a partial offset for this anticipated loss of students, the originally projected study sample for this group was doubled, from 25 to 50; this provided 25 Comparison and 25 Experimental students, about equally divided between boys and girls.

Accurate records of rehabilitation center attendance of Experimental students show an absentee rate of approximately 30 percent (Table 25); this compares with a " guesstimate " of a considerably higher school absentee rate (empirical estimates run around 50 percent, although precise records of attendance could not be obtained).

Punctuality at the rehabilitation center was extremely erratic and, when computed, accounted for an additional 10 percent of attendance time.

By the end of the evaluation semester in January 1963, 4 Experimental students had already been lost; 1 returned to high school, 1 moved to New Jersey, 1 dropped out of school, 1 was admitted to a State training school. Replacements had to be found and added immediately. Moreover, at this same time, 16 of the 25 Comparison students had dropped out of school completely; 6 others had been returned to high school. By June 1963, the remaining 3 Comparison students had also dropped out of school. By June 1963, 3 more Experimental students returned to high school, and 4 others dropped out of school. It is possible, perhaps, to postulate from this limited experience that the project's program exercised some school holding power for the Experimental students.

The recapture of both Experimental and Comparison students for reappraisal in the spring of 1964 was only partially successful. Although students were reevaluated in several areas — vocational, psychological, psychiatric — not all students participated in, or completed, all procedures. Table 26 indicates the number of students recaptured for any or all aspects of the reevaluation.

Whereas all Experimental students were recaptured for reappraisal, 9 Comparisons could not be reached, even for an interview.

The following brief excerpts from D.V.R. counselor's reports indicate the reasons for failure to return these 9 students for reappraisal:

1. "Released from P.S. 621 January 1963, because of pregnancy; refused to participate in re-evaluation."
2. "Admitted to New Hampton Training School for Boys (a State facility) for overt behavior at P.S. 622; not available for re-evaluation."
3. "Unable to find for re-evaluation."
4. "Failed to appear for re-evaluation."
5. "Released from P.S. 621 June 1963, because of pregnancy; refused to participate in re-evaluation."
6. "Dropped out of school; refused to cooperate further."
7. "All efforts at contact fruitless since time of initial evaluation."
8. "Released from P.S. 621 December 1963, because of pregnancy; refused to participate in re-evaluation."
9. "Moved; address unknown."

Various known techniques of case contact were utilized to recapture students for re-evaluation — ordinary mail, registered letters, telephone, telegraph, school visit, home visit(s), and collateral contacts with family members, friends, and known agencies. No case was considered to be unreachable until all avenues of communication had been exhausted. The high rate of fall-off among Comparison girls in Unit III can undoubtedly be attributed to the high incidence of pregnancy in this group. In 1963, 4 out of 12 Comparison girls in Unit III had experienced a pregnancy. By the summer of 1964 the number had grown to 9 out of 12; on the other hand, *none* of the Experimental girls of Unit III had experienced pregnancies! No causal relationship is here being attempted between the effects of our program and the incidence of pregnancy. However, this extreme difference in experience between Comparison and Experimental girls suggests the possibility that the latter group may have found in the project meaningful constructive substitutes for the kind of relationships sought by their Comparison peers.

E. *A Particular Case Experience*

No single case illustration can be truly typical of the experience in the project of a large group of " 600 " school students. Although statistical findings must be guarded at this point, either because of the smallness of the sample or the short interval of the project thus far, case records reflect sharply the qualitative experiences of most students, from one extreme to another, ranging from outright rejection of D.V.R., the rehabilitation center, the school and the home, to the other pole of strong authority-figure identification, improved self-image, and a crystallized orientation for educational and/or vocational goals. One illustrative case presented here contains elements of a " good " outcome.

> Case F.G. — Although client was in the " 600 " school as the result of a " behavior disorder " (" temper tantrums and defiance of authorities "), the project's psychiatric examination characterized her as " severe psychopathology; schizoid with possible schizophrenic background reaction."
>
> She is the middle one of three children whose mother is deceased and whose father still resides in the West Indies. The grandmother, a former domestic, keeps the family together with financial assistance from the Department of Welfare. Client shares a room with her sister, but has her own bed. In addition, an aunt and her son help make up this family unit.
>
> At the screening interview, client was seen by D.V.R. counselor as

" A dull girl who goes along with plans made for her — up to a point — but does have flare-ups when she wishes to resist suggestions. There are times when she appears to withdraw and it is difficult to judge how much of the interview she is absorbing. She would like to be a baby nurse."

At the same time, the psychologist described her as " A very angry, resentful, surly, ungiving girl. Everything that she was asked to do was too much for her. In any pressure situation her tendency is to avoid it and to get out of it. She is terrified of failure and is apparently unable to tolerate minimal frustration. She has little sense of personal responsibility to herself. It is not likely that there are any meaningful relationships in her life at this time."

Also in 1962, the vocational evaluator at F.E.G.S. described her as follows: " Responses are dulled, monosyllabic, vague and evasive. During work sessions, client was relatively quiet and not socially active. Her quality and quantity of work is good, although she was generally unmotivated in a strictly motor activity. Tests indicate a potential for training in simple clerical operations, for work in a fairly methodical position unhurried by time pressures."

Following the evaluation, client entered upon the service program described earlier where she received the full range of services and during which her attendance was quite good. By the time of the reappraisal in the spring of 1964 the professional reappraisal of F.G. had been considerably modified. The D.V.R. counselor now saw her as " Having made the greatest improvement of any student in the program. She has won agency awards for punctuality and attendance, reports to all appointments on time, and her behavior is quite good. She is cooperating in trying to work out her problems of communication. Her outlook for a satisfactory vocational adjustment must be rated as excellent."

The psychologist reported that " F was more cooperative on this occasion than during the first appraisal. She was very timid and cautious when answering questions, but she gave no signs of anger or severe frustration in this situation. The Rorschach lent credence to the feelings that F. has more potential than she presently shows on an objective intelligence test. She has good capacity to relate and, in fact, wants very much to find a relationship with an adult where she can feel comfortable and at ease. She has no distrust of authority, but rather a feeling that authorities are well meaning, but not capable of helping. Indications are that she would be more responsive to a female adult authority. She would welcome and cooperate in remedial reading and arithmetic. She wants to become a nurse's aide and seems to have a valid interest in helping people."

This client was seen again by the D.V.R. counselor for followup a year later, June 1965, and he reported that " Client has just been graduated and is being returned to Julia Richman High School as of the fall semester. She continues to present an excellent picture of emotional and vocational adjustment. There has not been a single report of a behavior problem of any sort for more than sixteen months."

F. *Quantitative Findings*

As is made abundantly clear in other sections of this report, the Unit III students were not merely " emotionally disturbed " but rather presented high degrees of social disorganization. For many, the chief reason for referral to a " 600 " school was because of manifest classroom behavior problems, rather than because they displayed one or another of the diagnosable emotional disorders. It was expected that, as a group, these students would present a severe test for the research design of the study, that attrition rates would be high and that many problems would be encountered relating to discipline and management. On the whole, the Unit III's were almost classical citizens of the " culture of poverty," with all that this status implies for family disorganization, the hazards of juvenile delinquency and illegitimate pregnancy, and the associated vicissitudes of slum life. Under these circumstances, it is a tribute to the persistence and ingenuity of the project staff and the service agency that the initial group of E's remained relatively intact for a substantial part of the two years covering the time from appraisal to reappraisal, although not without frequent crises. On the other hand, a large number of C's were lost to the project and could not be recovered for the reappraisal evaluation, especially for vocational re-evaluation by the service agency. In the material to follow, therefore, data reported for E's is more certain, than for C's, since attrition rates were much higher for the latter.

1. *The Psychological Testing Data*

It is evident (Table 27) that Unit III's are considerably below their respective age norms both in I.Q. and scholastic achievement. It seems reasonable to infer that these limitations are a consequence both of their severe social and educational deprivation and of their emotional problems. Moreover, both E's and C's made very meager gains in intellectual measurement during the 2-year period under review (Appendix F). Also, the gains made by the E's who received a year and more of training in a rehabilitation agency were not different from those made by C's. For Unit III students, therefore, the effect of the rehabilitation service does not reflect itself in changes in mental testing and scholastic achievement scores, in sharp contrast to findings on Unit I students.

2. *The Rating Scale Data*

The data of Tables 28 through 32 reveal very little. Numerical shifts from appraisal to reappraisal are small, scattered, and are as often in the negative as in the positive direction. Only two significant differences are found. In Table 30, the service agency sees the E's as having significantly greater potentiality for job placement after training than before, and the D.V.R. counselor sees the E's as being significantly more unrealistic in their vocational aspirations (Table 32) at reappraisal than at appraisal.

Similarly, an item-by-item examination of the scalar evaluations made by the consulting psychiatrist and psychologist from appraisal to reappraisal reveals no consistent trends. Both groups were felt to be somewhat less overtly hostile and more passive at reappraisal than on initial contact, but there was no special gain of E's over C's. On the whole, it can be concluded that the rating scale instruments failed to detect any substantial gains made by E's, as compared to C's, as a result of the period of rehabilitation training.

3. *The Followup Data*

Of the 50 students in this sample, followups were completed on 44; 1 Experimental and 5 Comparisons could not be reached for interview for the following reasons:

(1) *Experimental*

Call to a settlement house indicates that client is reported to have been arrested for assault and robbery during the winter. Later she was reported to have run away, breaking probation. They had no further information. Home visit showed family no longer at address. Superintendent of building stated that family had "moved" but he claimed not to know address. A call to Juvenile Term Court indicated case closed and no present information as to status. Two calls to Criminal Court (two months apart) revealed no indication that client was ever there. A check with utility company indicates no information as to present address. Client listed as not found. Total contacts included 6 phone calls and one home visit.

(2) *Comparison*

A call to parent's home indicates that client is at present at Riker's Island. Before this he was at Elmira Prison. Before that he was at Warwick. A call to Riker's Island indicates he is presently an inmate there. A visit to Bureau of Passes at 100 Centre Street revealed need to write for specific request, but reply was received too late for timely action. Attempts to contact include 4 telephone calls, 1 letter, and 1 "other" (visit to Bureau of Passes).

(3) *Comparison*

Four home visits were made to client, 2 during the day, 1 on Saturday, and 1 in the evening. He was alleged to be working at all times although place of work, hours, and days not divulged. Client has no phone. A letter was sent to him enclosing 30¢ in cash and asking him to call. No call received. A letter was sent asking him to submit to interview for payment of $5. A card was subsequently received from him saying that he could be interviewed at 7:30 p.m. An appointment letter was sent to him to report to D.V.R. office at that time, but he failed to keep it. Total attempts at contact include 4 home visits, 1 telephone call, and 4 letters.

(4) *Comparison*

A phone call to client's parents indicated that he was at that time en route from training camp with his Army unit to the Far East. His old address was obtained from a questionnaire forwarded to him with request that it be completed and returned to this agency. Nothing further heard from him. He was considered as not available. Total contacts attempted included 2 telephone calls and 1 letter.

(5) *Comparison*

Client has no phone. Two home visits made to her home. On first visit, client's mother said she was working, including Saturdays. Promised to have client call, but no call received. On second visit, mother said client was living in the Bronx, claimed not to know telephone number or address. Promised again that client would call D.V.R. Letter sent containing three dimes requesting that client call for possible phone interview. No response. Another letter, requesting client to cooperate for $5 payment, was sent. No reply was received. Total attempted contacts include 1 telephone call, 4 letters and 3 home visits.

(6) *Comparison*

A home visit to former residence indicated that client had moved. No one in two-family house had any idea where they had gone. Checking phone book under parent's name unrewarding. Letter to utility company elicited no information as to a possible new address. Client listed as not found. Total attempted contacts included 1 phone call, 1 letter and 1 home visit.

An extremely intensive effort (Table 33) was required for the D.V.R. counselor to establish contact with the 44 students.

Although telephone calls and home visits were a major means of establishing contact, collateral contacts were equally important in locating students for purposes of followup. Such contacts included court or prison, neighbor, relative, employer, social agency, clergy, school, utility companies, Department of Hospitals, and several hospitals.

Despite the high attrition rates, 44 of the original 50 Unit III students were interviewed in followup, including 21 of the original 25 C's. Only 4 of 23 interviewed E's and 2 of 21 interviewed C's were found to be still in school, 2 years after this study began. On the other hand, the 19 C's who had left school had been in the labor force for an average of from 15 to 16 months, while the 19 E's had been in the labor force for only 10 months. Thus, the rehabilitation service offered to E's appears to have kept them in school somewhat longer than the unserved C's.

The differential in amounts of time that E's and C's have spent in the labor force makes it somewhat difficult to compare their respective employment experiences. At the time of the followup, C's showed a better employment record than E's, although this may simply be a function of the fact that the former were available for employment for a longer period. At the time of interview, 7 of 19 C's had jobs and 15 had worked at some time since they had left school. In contrast, only 3 of 19 E's were currently working and 11 had worked at some time since leaving school. On the whole, the employment records of both subgroups are spotty and unstable. It is worth noting that neither subgroup seems to have become involved with sheltered employment or with Job Corps operations to any great extent (2 C's and 3 E's report such involvement).

With respect to other aspects of their personal, social, and familial adjustment, the followup interviews could find no significant differences between E's and C's. The adaptation level of both groups remains poor. There is no interest in further schooling, very minimal desire for further vocational training and ambivalent motivation for employment. It would appear that neither the special education offered by the " 600 " schools, nor the vocational experience provided by the project is sufficient to overcome the very severe multiple disadvantages under which these youth have lived, and which they continue to encounter.

VI. GENERAL OBSERVATIONS

The first 3 years of this 5-year study have yielded experiences of both a positive and negative nature which will have to be reviewed 2 years hence in the light of replication data. Beyond the general finding of measurable vocational gains for the physically handicapped, minimal vocational gains for the mentally retarded, and questionable vocational gains for the "600" school students, there were a number of experiences generic to all three disability groups which are worth noting. In addition, certain problems of interagency collaboration require consideration, inasmuch as the success of this collaborative project's design and methodology rests on smooth, dependable cooperation among all participating agencies. The ensuing items are not presented in any order of priority or significance but are, rather, random observations of specific elements or problems of the program which have had a bearing on the project's course and will be helpful in the development of future similar programs.

1. *Client's Socioeconomic Backgrounds*

The distribution of families in Unit I (Physically Handicapped) by socioeconomic status is in marked contrast to the families of Unit II (Mentally Retarded) and of Unit III ("600" students) where only 8 to 9 percent are in the professional-white collar category; 53 percent of Unit II, and 42 percent of Unit III are in the unskilled category (Table 34).

By and large, the Unit I families represent a middle-income group, displaying an active involvement in their child's problems. Most have had considerable experience in dealing with medical facilities and in keeping appointments for diagnostic and treatment services. The family unit (in Unit I) tends to be closely knit, with only 8 families considered to be "highly" or "moderately" disorganized. On the other hand, 46 families (85.2 percent) were considered to have "mild disorganization" or none at all (Table 35)

Significantly, families of mentally retarded students showed a higher rate of disorganization than those of the physically handicapped, while families of the emotionally disturbed showed the highest rate of disorganization, 22 out of 50 families, or 44 percent (Table 35). This pattern is reflected in the high degree of cooperation experienced with families of Unit I and the poor responsiveness from families in Units II and III.

Efforts at family counseling, both on an individual and group basis, have been extremely rewarding with the parents of the physically handicapped children. Similar efforts with parents of mentally retarded and emotionally disturbed students have failed, primarily because of the failure of these families to respond to invitations and appointments, despite the most elaborate efforts at interpretation.

Family expectations of vocational achievement for their children, in all three units, tend generally to be appropriate or mildly higher than appropriate, and seem to parallel the student's own self-expectations.

Although most families had positive reactions to the project, between 10 and 20 percent were " neutral " or " indifferent," reflecting a lack of interest or of understanding in its content or goals.

2. *Recapturing the Sample for Reappraisal*

The reappraisal for Study Group I was carried out in the spring, 1964. Staff achieved a 100 percent recapture of students in the Physically Handicapped Unit, as contrasted with a 91 percent recapture of students in the Mentally Retarded and a 76 percent recapture of students in the " 600 " School Unit (Table 36).

Various traditional techniques of case contact such as ordinary mail, registered letters, telephone, telegraph, school visit, home visit, and collateral contacts with family members, friends, and known agencies, were utilized to reach students, particularly Comparison students. No case was considered unreachable until all avenues of communication had been exhausted.

3. *Neurological Findings*

The neurologist reports (Table 37) significant positive findings in the examinations of 64 students in Unit II (Mentally Retarded) and Unit III (" 600 " Schools).

Forty-four (62.5 percent) of the 64 students examined were classified as *other than* " normal neurological development." The neurologist reports that " the most striking objective findings were the very high number of abnormal eye movements — 15 out of 24 in Unit II, and 24 out of 40 in Unit III, a total of 60.9 percent in the entire tested group of 64. Parallel ophthalmological examinations of the mentally retarded students reveal significant findings of visual problems — some minor, some major. A similar percentage, 59.4 percent displayed a presence of depression of deep tendon reflexes in lower extremities, asymmetry or the presence of equivocal pathological reflexes." Because learning retardation was a major common symptom in Units II and III, the neurologist raises the question " of how many children in these two groups show this symptom as a result of either actual brain damage or some disturbance of neurological development. The nervous system evaluation, especially if done in the early years, may be a help in deciding the educational approach to the individual child."[11]

4. *Student Mobility*

The study design had assumed that students would be admitted to the program at ages 14 to 16, and that each Experimental Unit would be set up as 4 class groupings within their school setting. They would remain in the program in this form for 2 years. In actual practice, it was not possible to adhere to this structure, except for the age limitations. The sample for all 3 disability units was derived ultimately from 20 schools rather than 4 schools, primarily because of the difficulty in finding a sizeable sample of physically handicapped students in a single school who would meet the criteria of age and severity of disability.

By the beginning of the second year of the project, the study sample was distributed among 40 schools — twice the number of the preceding year! Most of the shifts involved transfers of students to high schools, particularly the physically handicapped students; a few " 600 " school students also fell into this category. In a few cases it was possible to continue such transferred Experimental students in the program. For the most part, however, the school authorities considered as too serious, the loss of 2 days a week from academic studies.

The mobility of " 600 " school students was particularly extensive, taking the form (in addition to school transfers) of chronic and widespread lateness and truancy, school dropouts, conflicts with the law, and incarceration at Youth House and at Training Schools. Fortunately, the fall-off of " 600 " school students had been anticipated to some extent at the very early stage of project organization, and the sample for this Unit was doubled as insurance against this eventuality.

Nevertheless, the scattering of the sample eliminated the possibility for effecting the desired group cohesion of each Unit in a single class, with the same teacher, and with the continuity of students in the group over a 2-year period. Because it was planned that the teacher would accompany her class to the rehabilitation center and thus be fully exposed to the vocational program, one of the values that could not be measurably achieved was the transference by the teacher of vocational ideas to the educational milieu. Administrative relationships were greatly multiplied, and the task of recapturing the sample, for reappraisal in the spring of 1964, was made considerably more complicated.

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[11] Appendix E — Complete Neurological Report.

5. *Reading Problems*

In all three disability units, students' reading grades measured substantially below their intellectual capacities (Table 38); nor was much being done (except partially in Unit I) by way of a special effort to remedy this deficit. At the outset of the study, it had been agreed among all participating agencies that "*special remedial teaching should be provided by the schools* and made available to individual subjects in the experimental group as required. These services should certainly include remedial instruction in the areas of reading, arithmetic, and speech therapy."[12] Nevertheless, no such special services were provided, except for a minimal effort in Units I and II. As for the "600" school students, some small extra efforts were made for the boys, but none for the girls.

The importance of reading proficiency and language skills is too well accepted to be belabored, and the value of remediation has been amply demonstrated. In this study, the physically handicapped Experimental students had some special remedial reading services which the Comparisons did not; the Experimentals went from an appraisal mean of 4.8 to 5.9; the Comparisons went from 5.9 to 6.2. Thus, the Experimentals experienced almost a fourfold rate of advance compared to the Comparisons! For them, remedial reading was worthwhile and will continue to be so, if continued. In the other two Units, Mentally Retarded and "600" schools, there was almost no difference in the rate of reading progress between the Experimentals and Comparisons, and this is undoubtedly attributable to the failure to provide remedial reading. The professional literature, as well as numerous social action program formulations, have for years been replete with well-documented recommendations for the development of special remedial services, particularly for certain large groups of our under-served population. Most noteworthy in recent years have been the analyses of Dr. Kenneth B. Clark,[13] the Allen Report on Public School Segregation in New York City,[14] the report of the National Association of Intergroup Relations Officials,[15] the HARYOU Study of 1964,[16] and the new crash program for providing language skills announced by Dr. Bernard Donovan. The full implementation of Dr. Donovan's plan over an extended period of time should ultimately have a remedial as well as preventive impact on the problem.

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[12] Project Plan, p. 14.

[13] Kenneth B. Clark, Ph.D., "Prejudice and Your Child," 1962, Beacon Press.

6. *Unit I — Promising Implications* (*Physically Handicapped*)

The statistical evidence, as well as the staff's empirical experience, indicate that significantly more positive changes occurred for the Experimental students than for Comparison students. Improvements for Experimentals were manifested in several areas, such as intellectual level of functioning, school achievement, and vocational progress. The gains made by these students amply justify the immediate inauguration of an on-going demonstration program which would utilize the project's experience.

A tentative plan for such a program has been prepared and its possible early implementation is being considered. Current experience with the replication group indicates the likelihood of a repeat experience, thus confirming the validity of the recommendation for the new extended demonstration program.

7. *Unit II — Trends Undecisive* (*Mentally Retarded*)

Although followup data of mentally retarded Experimentals showed ultimate gains over Comparisons in some areas of personal adjustment and vocational achievement, these gains were too minimal and the N's too small to hazard any kind of statistical conclusion. In the objectively measured area of intellectual progress, the intelligence levels of both E's and C's increased about the same amount. More meaningful analysis of data will have to await the completion of the experience of Study Group II and the comparison of its replication data with Study Group I.

One problem which undoubtedly affected the performance of students in the rehabilitation center, but whose impact cannot be fully assessed, is the sharp turnover in key sheltered workshop staff.

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[14] See footnote 9.

[15] "Public School Segregation and Integration in the North," Analysis and Proposals by the Commission on School Integration, National Association of Intergroup Relations Officials, November 1963.

[16] "Youth in the Ghetto," Harlem Youth Opportunities Unlimited, Inc., 1964.

Although the mentally retarded sample was a relatively stable unit, the workshop staff was not, so that in 3 years it was necessary to appoint 4 new workshop supervisors; this, in the face of a critical need which mentally retarded persons have for an atmosphere of stability, exemplified particularly by continuity of personnel. The problem is compounded when staff replacements are made without adequate preparation of clients and, then, turn out to be inexperienced in the field, generally new to the agency, and completely ignorant of the research project's program and goals. Such a workshop supervisor is, in actuality, learning the job at a time when the requirements call for a person who can offer highly competent professional supervision.

This problem is part of a larger one which has faced the project in all three disability units and is not unique to any one. While interagency collaborative arrangements have been quite successful, the very fact of a multiagency focus on a single client carries with it built-in ingredients of disagreement and discord. Agency traditions, policies, philosophies, and practices in regard to the same problem differ between agency and agency, school and school, director and director, principal and principal. To a remarkable extent, potential trouble spots rarely developed, and, when they did, were quickly and efficiently handled in a solid professional interagency context. The client, however, has always been faced with the difficulty of determining to which agency he was most directly responsible; should it be his school, the Division of Vocational Rehabilitation, or the rehabilitation agency where he was receiving his direct vocational services? Students were extremely sensitive to this fragmentation of authority among the collaborating agencies and the reaction of students ran the spectrum — from confusion to deliberate attempts at agency manipulation by playing one against the other. For the project staff, collaboration among independent autonomous agencies has also meant incomplete control over its sample population; of necessity, each agency's internal policies and practices superseded the protocol of the project, which was indeed a very small aspect of the total agency's operation and had to take second place or lower in the scale of agency priority. As a purchaser of services, the project could not adequately exercise control over such internal agency problems as staff appointments, quality of supervision, and certain aspects of direct client service, such as handling problems of discipline, selecting particular types of work experiences, relating parents of students more closely to the vocational setting, and adaptation of vocational processes to the educational milieu. One must wonder about the extent to which these and other defects of multiagency collaboration tend to offset its benefits.

8. Unit III — *Problems and Questions ("Emotionally Disturbed"/Socially Maladjusted)*

Of the three disability units under study in this project, Unit III has provided the greatest number of problems, has raised most of the unanswered questions, and has resulted in findings showing the least amount of change, forward or backward, either in intellectual,[17] social, or vocational areas. It is hoped that the replication experience will yield more definitive overall statistical findings than are possible at this time.

Youths who find themselves designated as "600" school students are little understood by many persons responsible for their care, and they have been falsely viewed as having come to the end of their academic road. So much effort and concentration go into the management and control of "behavior problems" that, even with augmented staff, such vital areas as educational curriculum, remediation, effective guidance, vocational exploration, and orientation play a secondary role. The chronic truant, even the pregnant student, is only casually sought and, even then, not in the sense of delving into the psycho-dynamics of the truancy, or pregnancy, and its surrounding problems.

The "600" school student is an enigma, to himself, his peers, and his surrounding adult world. His social backwardness manifests itself in embarrassment, confusion, frustrating resentment, and resulting defiance of authority in a new surrounding, such as the sheltered workshop of a rehabilitation agency. He is suspicious in such a setting and tends, at the outset, to question his own potential for vocational achievement, even though he engages in an elaborate system of vocational fantasy. This composite personality requires a system of immediate gratification in order to assure his adaptation to a structured agency situation controlled by authority. Recognition for good work, financial remuneration for productive meaningful work, and attention to personal needs such as health problems are some of the techniques that have been essential to assure these students' perseverance.

That no essential differences were displayed in this 3-year experience between Experimentals and Comparisons is not surprising when one considers the severity of their social deprivation with its resulting ego destruction. At this stage, it would be presumptuous to assume that the project's program contributed substantially to the strengthening of students' self-image (a program objective). Nevertheless, we do know that Experimentals stayed in school longer than Comparisons; whether this is accident or program effect may be borne out by the replication experience. The available evidence is certainly insufficient to offer a rational explanation. No more than it can be explained why almost all the Comparison girls experienced a pregnancy while none of the Experimental girls did; accident or program effect? Any guess would be hazardous.

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[17] Appendix F.

In addition to the reward psychology that was applied in the vocational setting, the eventual intensification of individual rehabilitation counseling services (made possible by the addition of a D.V.R. counselor in December 1963, in the middle of the second year) seems to have played a major role in maintaining the staying power of these students. The value of this approach is being borne out in the replication experience and will be reported more fully in the project's final report. For the present it seems worthwhile to report that intensive, supportive services of a skillful, sensitive, and genuinely interested counselor are yielding positive results in terms of increased attention span, improved attendance rates, heightened interest in remediation programs and academic achievement, and a slow eradication of the barrier of suspicion that has formerly existed between these youths and " the outside world." The fruit of the project counselor's efforts are being realized daily as student after student seeks his help in personal or family matters. Although these appeals seem, at face value, to be unrelated to the program of the project, the readiness and ability of the counselor to intervene and offer assistance do indeed have a bearing upon the student's motivation for self-improvement and for developing his fullest potential.

Because our analysis was not designed to deal statistically with some of the interpersonal dynamics herein described, it will be useful to the reader to review the counselor's thumbnail sketch of the performance history of each of the " 600 " school students.

Experimental Students

1. Client never evidenced great involvement in program, but stayed in until June 1964. Reported once to F.E.G.S. in September 1964, allegedly seeking work. She failed to respond to three D.V.R. letters during this period, and also failed to follow through with F.E.G.S. Case closed November 1964. It took 1 phone call, two letters, 1 telegram and 4 home visits to effect the followup. She is attractive and admits to being a party girl, and there is some evidence she may have been living with at least one man during this period.

2. Client remained in program until June 1964. His affect was immature, but he generally related well and showed somewhat better than average promise for adjustment. In June 1964, he went to another state where he was arrested for car theft and sentenced to one year in State Prison. He immediately wrote D.V.R. asking for help. Upon being released August 1965, he returned to New York and reported at once to D.V.R. for work. Placed in a Neighborhood Youth Corps job, he got a better one a few weeks later and sent his friend to D.V.R. to step into his old job.
3. Client remained in program until June 1964, but never became strongly involved in it. No contact later. Followup disclosed she had immediately married and had a child.
4. Client is an attractive girl with best surface ability in social relationships in group, who never was reached by the program. She stayed in however, until the end, June 1964. After several attempts to offer her services, she finally refused D.V.R. services in August 1964, one of the few to do so, and her case was closed. She responded to the first call for followup and was placed in a factory job by D.V.R. Anxiety and fear had been the main inhibiting factor, and she finds working thrilling.
5. Client never was reached by the program although she was around on an on-off basis until June 1964. She was brought in once by parents for job, but she, herself, never made any attempt in this direction. She has been in trouble for stealing, assault and narcotics. She was one of two students not found.
6. Client was an indifferent participant in program, and dropped out in May 1964, because he had a job. However, he cooperated fully with D.V.R., the only student to do so for several months, and has been getting remedial reading. When he lost his job in summer of 1965, he called D.V.R. for assistance in getting another.
7. Although she had one of the poorest prognoses of any in the sample, client turned out to be the best student in the Experimental Group. Being one of the youngest, she remained in a "600" school for another full year, one of three students to return in fall 1964. In June 1964, she was returned to high school. Her big problem, which is still a factor, is a relative inability to function in interpersonal relations.
8. Client did not respond well to the program until the last two months when her performance improved markedly. As a result, she was placed in a hospital job where she performed well. As a result of this, she was returned to high school where she spent the 1964–65 school year. Followup shows her to be generally well adjusted vocationally. She has not contacted D.V.R. for help.
9. Client responded indifferently to the program although he remained in it to the end, June 1964. He remained in con-

tact with D.V.R., but on an erratic basis. He would appear suddenly without an appointment. On two occasions, he went to the men's room and disappeared. He had been arrested several times for assault and shoplifting during this period, and in September 1965, he suddenly appeared asking for work because it " would look better in court."

10. Client had the poorest response to the program of any of the boys, and dropped out in January 1964. He made no attempt to contact D.V.R. Followup indicated that he was working on Neighborhood Youth Corps job.
11. Client's response to program was fair. He was sent to high school in February 1964, where his adjustment was, again, only fair. In May 1964, he got a part-time job through D.V.R. and worked all summer. In the spring of 1965, he began to fitfully cooperate with D.V.R. in vocational planning. He has made several visits to Research Unit while keeping appointments at D.V.R.
12. Client was an atypical member of the sample. He was always friendly and helpful, and read constantly during his spare time. He seemed to be possessed of a drifting vagueness, however, and unable to focus on the realities of his life. He remained in the program until the end, June 1964, but was a chronic truant. He came to D.V.R. once, unannounced in July 1964, but was not seen again. Followup found him doing nothing, his personality pattern unchanged.
13. Client oriented well to the program and stayed in it until the end, June 1964. Work seemed to have definite meaning for her and she was one of the best students in the group. She came from a very deprived environment and her adjustment in the community was constantly very poor. Being one of the younger ones, she returned to " 600 " school in September, but was soon dropped. She requested placement herself, to escape the street and was at Hudson Training School for Girls until August 1965. After several call-ins, she reported to office in August and was placed by D.V.R. on Neighborhood Youth Corps job.
14. Client dropped out of program in December 1963, when he became 16. No further contact with him until followup, when he was found to be working as a painter's helper. In August 1965, he came in with friend to see if he could get better job.
15. Client stayed in program until end, June 1964, but his orientation to it was indifferent. There was no further contact with him until followup. He had no work and had been arrested twice. He was placed on a Neighborhood Youth Corps job which he left after a couple of weeks.
16. Client is a friendly, personable girl who was returned to high school in February 1964. She dropped out within 2 weeks and visited office twice during spring 1964, asking for help finding work. She found own job, and followup found her

working and contented. She is very well disposed toward D.V.R. and spontaneously kissed counselor when he visited her home for followup.

17. Client is an alert, well-appearing boy with an arm disability whose orientation to program deteriorated markedly with change of workshop counselor. Nevertheless, he stayed with the program to the end. He reported twice to D.V.R. during summer 1964, and was placed in hospital job by D.V.R. He stayed 2 weeks and quit. No further contact until followup, when he was found not to be working and to have been in trouble. He showed eagerness to cooperate in reopening case but has not followed through. There is some evidence that his show of cooperation was just a device to placate the courts.

18. Client is an extremely attractive, petite girl who oriented poorly to program, but stayed in it until the end. During the summer of 1964, she ignored several call-in letters. She returned to "600" school in the fall where she remained until winter. During this time, she failed to cooperate with regular D.V.R. counselor, although she did come in once for an interview. Followup showed her to be in a training program at Police Athletic League. A major factor in her lack of adjustment at D.V.R. was her fear of all testing, counseling, etc. It was never possible to establish contact with her.

19. Client is an intelligent boy whose main personality trait was suspiciousness. He remained in program until the end, but character made him a loner. He had tremendous desire to work, but lost several jobs because he suspected employers of cheating him, etc. He was referred to Police Athletic League while still in program and they got him two jobs. He was also placed by F.E.G.S. once. He came in on appointment to D.V.R. in July 1964, and twice without appointment in August, the last time of which he engaged in bizarre and hostile behavior. There was no further contact until May 1965, when he was in neighborhood applying to Police Athletic League for employment and stopped by office.

20. Client was returned to high school in February 1964, where she was unable to make an adjustment, at least in part because of poor academic preparedness. She dropped out but made no contact with D.V.R. Followup found her depressed and doing nothing. She was given referral to Neighborhood Youth Corps.

21. Client dropped out of program when he was 16 in February 1964. There was no further contact with D.V.R. as he refused to cooperate with regular counselor. He got a job as a delivery boy and once dropped in at workshop for visit. In the fall of 1964, he was placed in Youth Camp near Albany where he is at present.

22. Client was generally one of the better boys, remaining in program until the end. However, he refused to cooperate further

with D.V.R. although he did respond to one call-in letter in July 1964. Followup showed him to have been arrested once and not to have worked. In June 1965, he visited F.E.G.S. workshop to report he was then working on Neighborhood Youth Corps job.

23. Client dropped out of the program in December 1963, and refused to cooperate in any further manner. Follow-up indicated that she has remained at home, not working.

24. Client remained in program until the end, June 1964, but her adjustment was poor. She was often hostile and uncooperative and her behavior was at times bizarre. She insisted she wanted D.V.R. training but when seen by regular counselor, she refused services, saying she was going to school, instead. No further contact until followup when she was found to have had six months of training in clerical practices under Manpower Development and Training Administration, but was not placed. She was referred to the Neighborhood Youth Corps by D.V.R.

Comparison Students

25. Client ran away from home in March 1963, and remained unfound until located by D.V.R. in February 1964 at time of re-evaluation. She was referred to Police Athletic League by D.V.R. where she was referred 6 times and finally placed on a part-time job. She continued working until she became pregnant and married. At followup she was found to have delivered and to want work. She called D.V.R. to ask for help. A major factor in her lack of adjustment seems to be an alcoholic mother who abused her and caused her to constantly run away. In all contacts with D.V.R. she showed herself to be responsible and reliable, and demonstrated no signs of behavior difficulty.

26. Client moved to another state in spring 1963. He later moved back to New York City and entered a regular high school, from which he dropped out after several months. During this time he made no contact with D.V.R., but did report for re-evaluation after several call-ins. He has not cooperated since.

27. Client was discharged from school in February 1963, and later had a baby. At no time did she cooperate with D.V.R. in any fashion, ignoring all requests and call-ins.

28. Client dropped out of school in fall 1964. He cooperated in re-evaluation in the spring 1965, being one of few that even reported for the vocational part. He also reported to D.V.R. a couple of times in May 1964, and once in May 1965, in response to call-ins to initiate vocational planning. He never followed through, however, and contact has been lost. He has a withdrawn, suspicious personality trait, and this interfered with his accepting outside help. In spite of his reading

at the second grade level, he was found to have an artistic talent so great that it not only excited D.V.R. staff, but also professional art critics. His inability to motivate himself to take advantage of offered vocational training is a tragedy.

29. Client dropped out in spring 1963, because of pregnancy. She reported once to D.V.R. in December 1964, to complete re-evaluation. At this time she requested help in finding work. No further contact until followup when she was found to be working on Neighborhood Youth Corps job secured for her by HARYOU. It took 9 phone calls, 2 letters, 4 home visits and 4 visits to other agencies to effect the followup.

30. Client originally was assigned to the Experimental group but was sent to training school in March 1963, and switched to Comparison. He was later sent to Elmira Prison, and still later to Riker's Island. There has been no contact with him during this time.

31. Client was in the Experimental group but dropped out of school in September 1963. She got her own job and has been working steadily since that time. She has cooperated in full with D.V.R. in all evaluations and followups, perhaps visiting D.V.R. office 4 times for this purpose. Refused D.V.R. services, preferring to work out her own vocational problems.

32. Client is a very heavy girl (almost 300 pounds). Her behavior history in school was hostile and resistant. In January 1964, she was routed to D.V.R. by school, and 3 interviews were held in office during spring. It was impossible to initiate planning because of negative attitude and behavior. At followup she was found to be much more realistic, and had recently conducted the most thorough job search of any member of the sample. She finally got job through political club for summer. She called twice in August, to try to line up job for fall.

33. Client was in the Experimental group but was replaced after one semester because attitude was totally bad and uncooperative. She delivered a baby during late summer of 1963, and dropped out of school in fall 1964, to care for it. In spite of reported call-ins, she refused to cooperate at all with D.V.R.

34. Client was returned to high school in February 1963, and managed to stay there almost a year, in spite of poor academic skills. He dropped out in October 1964, and after holding several small jobs, managed to get into the Air Force where he is receiving remedial training. He was always cooperative with research unit of D.V.R. as well as F.E.G.S., reporting for all evaluations, etc., however, he did not cooperate with regular counselor to whom he was transferred.

35. Client was returned to high school in February 1963, and soon dropped out. He did not make contact at any time with D.V.R., and was not interviewed for followup because he was not available. He was working.

36. Client was returned to high school in September 1963. She made only fair to poor adjustment and dropped out in December 1964. She cooperated in re-evaluation and was referred to the Neighborhood Youth Corps during followup. She never contacted D.V.R. on own at any time.

37. Returned to high school in February 1964, and made good adjustment, as reported by school. However, he insisted on dropping out, and did so during the fall of 1964. He shortly afterward joined the Army and was shipped to the Far East. He never at any time made contact with D.V.R.

38. Client dropped out of " 600 " school in the fall of 1964. No further contact until followup in April 1965, when she was found to be pregnant.

39. Client was promoted to high school in February 1963, where he remained only a few weeks before dropping out. He responded for re-evaluation in April 1964, and again responded to call-ins in August 1964. At followup, he was found to be working in Mt. Sinai Hospital. He presents a cheerful, cooperative façade, and has always responded to call-ins, although never taking initiative himself.

40. Client was reported to have dropped out of " 600 " school by April 1964. She spent much time in Youth House, etc. She called D.V.R. for assistance in June 1964, and reported for appointment in August 1964. After this there were no more contacts until followup, when she was found to be hostile and uncooperative.

41. Client was discharged from " 600 " school June 1963, for pregnancy. Reported one time for re-evaluation but refused to complete it. There was no further contact with her. Followup found her working at HARYOU offices.

42. Client reported dropped by " 600 " school in December 1963. She reported for re-evaluation in April 1964, but there was no further contact with her until followup, when she was found to be in regular high school and evidently doing well.

43. Client was dropped by " 600 " school in the spring of 1963. There was no further contact with him until followup, when he was found to be generally uncooperative.

44. Client promoted to high school February 1963, from which he dropped out in January 1964. He reported for re-evaluation but there was no further contact until followup, when he was found to be working.

45. Client originally placed in Experimental group, but returned to high school in September 1963. However, inappropriate behavior towards girls caused him to be expelled. He was allowed to drop out in December 1963. He then lost two jobs, and in April contacted D.V.R. requesting vocational training. After interviews with both client and father, and after completing re-evaluation, client was transferred to regular counselor for planning and service. He was entered into

a Beauty Culture school where he was expelled within a week because of old problem around girls. Both client and father contacted D.V.R. several times during the summer of 1964, but regular counselor closed case. No further contact until followup, when client again requested vocational training.

46. Client dropped from " 600 " school December 1963 because of pregnancy. She refused further contact until July 1964, when she called for appointment. She then completed re-evaluation and was referred by D.V.R. to Police Athletic League for employment screening. She broke off contact in August 1964, and there was no further information until followup, when she was found to be working.
47. Client remained in " 600 " school until September 1964, when she was forced to drop out because of pregnancy. There was no further contact with her until the followup, when she was found to be married and living with husband and child.
48. Client was released from " 600 " school in the fall of 1963, because of pregnancy. She had refused to complete evaluation, and also refused to cooperate in re-evaluation, followup, etc. She has never been seen by present counselor.
49. Client was released from " 600 " school February 1964, to enter program in Mobilization for Youth. Responded to call-in in August 1964, when he appeared only lukewarm to D.V.R. services. No further contact until followup, when he was found to be working as plumber's helper.
50. Client was returned to high school February 1963. He moved and was lost to the sample. He is one of two students in sample not found.

The incredible number and variety of problems and social obstacles faced by these youths have been further affected by a development in recent years which has added a new, grand dimension to their overall perception of themselves and others. Remembering that 93 percent of this study sample was non-white (86 percent Negro; 7 percent Puerto Rican; 7 percent White) one must view the performance of our students while in the project against the background of the heightened tempo of civil rights movements and new poverty-fighting programs. Inevitably, these students have been caught up in the tone and spirit of these developing forces and, within the context of the program, they are evidencing expectations of meaningful futures for themselves. They recognize the need for better academic training and this may explain why Experimentals, given support and encouragement, remained in school longer than the Comparisons. Even at age 14, 15, and 16, they want a prevocational experience which is meaningful in terms of future vocational achievement and is not limited to the messenger, gas station attendent, or porter level, or even to other level semiskilled occupations. Although few now have aspirations for advanced education at the college level, they, nevertheless, are intensely eager for occupational skills which are personally satisfying, and which promise to be competitively marketable. This drive for training in skilled occupations is strongly related to a motivation for a satisfactory income, but carries with it the recognition of the need for preparatory training. Coupled with this realization is a strong desire to upgrade reading levels; students have been acutely aware of their limitations in language skills, and case records reflect situations of anguished embarrassment, frustration, and acts of social withdrawal resulting from a student's inability to comprehend and communicate. Students have pleaded for remediation in this area, a solid indication of their insight and readiness to participate actively in a meaningful learning situation. That these students should be given special encouragement and opportunity in this area of development seems no longer to be a matter of dispute. However, there does seems to be considerable difference of opinion, attitude, and practice on the ability of these students to absorb such learning. This type of attitude has been described in the literature and elsewhere as typical of some teachers and educators. Says Dr. Deutsch, " Some teachers establish low expectations, anticipate failure, and, true to the Mertonian self-fulfilling prophecy, find an increasing rate of failure."[18] Experience in this 3-year period confirms Dr. Deutsch's view. It has shown that *a,* project students display a higher learning capacity than is demonstrated in their measured achievement levels; *b,* that they can be well motivated toward participation in a structured program if the program is truly related to their needs and aspirations; and *c,* that such students are sensitive to, and respond positively, to professional personnel who exhibit a genuine understanding of such students, who can demonstrate a desire to help further their progress, and whose manifest expectations of the student's performance and potential is based realistically on a comprehensive, current, objective appraisal of that student as a total person, and not upon subjective judgments which are frequently open to all the pitfalls of personal bias and unreliability. What is clearly evident from the experience of the study is that without this educational base, vocational programs start with two strikes on the scoreboard, and expectations for vocational achievement can only be, at best, extremely guarded and, at worst, unpromising.

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[18] " Some Psycho-Social Aspects of Learning in the Disadvantaged," a paper presented at Boston University in 1964 by Martin Deutsch, Director, Institute for Developmental Studies; Professor, Department of Psychiatry, N.Y. Medical College.

Supporting Tables

TABLE 1

Mean Sizes of Special Public School Classes, 1958 and 1959

Type of Class	Mean Size as of October 31 Pupils 1958	 1959
Health Conservation:		
Elementary	12.2	12.1
Junior High School	15.8	13.0
C.R.M.D.:		
Elementary	13.9	13.2
Junior High School	17.0	16.9
"600" Schools — including High School	12.7	12.4

TABLE 2

Distribution of Study Sample Among 20 Schools

Disability Group	No. of Students	No. of Schools
Health Conservation	55[a]	14
Mentally Retarded	35[a]	3
"Emotionally Disturbed"	50	3
	140	20

[a] One case dropped after appraisal.

TABLE 3

Vocational Status of Families of Physically Handicapped Students

Classification	Number	Percent
Prof.-Exec., Semi-pro., White collar	19	35.2
Manual, Skilled, Semi-skilled	27	50.0
Unskilled	8	14.8
Totals	54	100.0

TABLE 4

Classification of Physically Handicapped Students (Unit I) by Current Status of the Disability

Current Status	Experimental Group		Comparison Group		Total	
	No.	Per- cent	No.	Per- cent	No.	Per- cent
Deteriorating	4	14	4	15	8	14.5
Stable	24	86	22	85	46	85.5
Totals	28	100.0	26	100.0	54	100.0

TABLE 5

Medical Assessment of Vocational Potential of Physically Handicapped Children

Classification	Experimental Group		Comparison Group		Total	
	No.	Per- cent	No.	Per- cent	No.	Per- cent
Good	18	64	14	54	32	59.0
Fair	2	7	2	8	4	7.5
Guarded	5	18	5	19	10	18.5
Poor	3	11	5	19	8	15.0
Totals	28	100.0	26	100.0	54	100.0

TABLE 6

Psychological Testing Data on Unit I E's and C's at Appraisal and Reappraisal

(E's = 26; C's = 24)

	Appraisal		Reappraisal	
	E's	C's	E's	C's
WISC I.Q.:				
Verbal (Mean)	78.6	82.6	93.9	85.8
Performance (Mean)	81.1	79.7	88.3	87.9
Full Scale (Mean)	77.3	78.3	90.8	87.3
Reading (Grade Placement)	4.8	5.9	5.9	6.2
Arithmetic (Grade Placement)	4.8	5.1	5.9	5.8

TABLE 7

Amount and Direction (+ or —) of Total Scale Mean Scores from Appraisal and Reappraisal, by Professional, by E and C (Unit I)

Professional	E			C		
	N	Mean Change	Direction	N	Mean Change	Direction
Counselor (Rehab. Agency)	26	3.2	+	17	4.3	+
Counselor (DVR)	26	3.3	+	22	3.4	—
Psychologist	25	12.6	+	21	5.4	—
~~Counselor (Rehab. Agency)~~	~~26~~	~~3.2~~	~~+~~	~~17~~	~~4.3~~	~~+~~
Teacher	27	2.3	+	21	0.1	—

TABLE 8

Number of Persons, by E or C, Who Show Increases (+), Decreases (—), No Change (0) and Who Were Not Available (NA) for Reappraisal, from Appraisal to Reappraisal (Unit I)

Professional	E				C			
	+	—	0	NA	+	—	0	NA
Counselor (Rehab. Agency)	13	9	4	1	9	6	2	6
Counselor (DVR)	16	10	0	0	7	15	0	0
Psychologist	19	6	0	1	7	13	1	2
Teacher	14	13	0	0	12	9	0	2

TABLE 9

Mean Difference and Direction of Estimates of Client's Potential for Job Once It Is Obtained, by E and C, by Professional, Appraisal to Reappraisal (Unit I)

Professional	E		C	
	Mean Difference	Direction	Mean Difference	Direction
Counselor (Rehab. Agency)	1.0	+	2.9	—
Counselor (DVR)	0.9	+	2.2	—
Psychologist	1.0	—	0	
Teacher (Public School)	0.9	+	2.5	—

TABLE 10

Mean Difference and Direction of Estimates of Ability to Maintain a Job Once It Is Obtained, by E and C, by Professional, Appraisal to Reappraisal (Unit I)

Professional	E		C	
	Mean Difference	Direction	Mean Difference	Direction
Counselor (Rehab. Agency)	8.7	+	2.9	—
Counselor (DVR)	19.3	+	6.5	+
Psychologist	17.3	+	1.2	+
Teacher (Public School)	3.6	+	5.9	—

TABLE 11

Mean Difference and Direction in Estimates of Realism of Occupational Expectations, by E and C, by Professional, Appraisal to Reappraisal (Unit I)

Professional	E		C	
	Mean Difference	Direction	Mean Difference	Direction
Counselor (Rehab. Agency)	25.0	+	35.3	+
Counselor (DVR)	13.0	—	9.8	—
Psychologist	4.8	+	5.0	+
Teacher (Public School)	No item		No item	

TABLE 12

Total Number of Contacts Required to Achieve One Followup Interview for Each Physically Handicapped Student

	Phone	Letters	School Visit	Home Visit	Collateral	Total
Experimental	7	14	15	3	30	69
Comparison	2	10	18	11	46	87
Total	9	24	33	14	76	156

TABLE 13

Vocational Status of Families of Mentally Retarded Students

	Number	Percent
Professional	3	8.8
Manual (skilled and semiskilled)	13	38.2
Unskilled	18	53.0
Totals	34	100.0

TABLE 14

Degree of Family Disorganization (Unit II)

Classification	Number	Percent
"Moderate" to "High"	12	35.3
"Mild" to "None"	22	64.7
Totals	34	100.0

TABLE 15

Neurological Status of Mentally Retarded Students

Classification	Number	Percent
Evidence of Brain Damage	5	21.0
Immature Nervous System	14	58.0
Normal Neurological Development	5	21.0
Totals	24	100.0

TABLE 16

Appraisal and Reappraisal Ratings of Vocational Expectations of Client C.D.: 3 Raters

	DVR Counselor		Psychologist		Rehabilitation Agency	
Rating Area	1962	1964	1962	1964	1962	1964
Placeability	Minimal	Moderate	Moderate	Moderate	Minimal	High
Adjustability	Little	Moderate	Moderate	Moderate	None	High
Potential for Training	Little	High	Moderate	Moderate	Moderate	High

TABLE 17

Psychological Testing Data on E's and C's at Appraisal and Reappraisal

(Unit II; E's = 15; C's = 16)

	Appraisal		Reappraisal	
	E's	C's	E's	C's
WISC I.Q.:				
Verbal (Mean)	61.2	65.7	67.7	70.9
Performance (Mean)	73.8	65.0	78.1	75.7
Full Scale (Mean)	64.4	62.3	71.0	71.2
Reading (Grade Placement)	2.7	3.1	3.0	3.4
Arithmetic (Grade Placement)	3.7	3.8	3.9	3.9

TABLE 18

Amount and Direction (+ or —) of Total Scale Mean Scores from Appraisal to Reappraisal, by Professional, E and C (Unit II)

Professional	E			C		
	N	Mean Change	Direction	N	Mean Change	Direction
Counselor (Rehab. Agency)	15	2.5	+	8	1.2	—
Counselor (DVR)	16	1.9	—	16	2.9	—
Psychologist	15	2.5	+	16	0.3	+
Teacher (Public School)	15	10.8	—	13	4.8	—

TABLE 19

Number of Persons, by E or C, Who Show Increases (+), Decreases (—), No Change (0) and Who Were Not Available for Reappraisal, from Appraisal to Reappraisal, by Professional Doing the Rating (Unit II)

Professional	E				C			
	+	—	0	NA	+	—	0	NA
Counselor (Rehab. Agency)	7	7	1	1	4	4	0	11
Counselor (DVR)	7	9	0	0	7	8	1	3
Psychologist	11	4	0	1	8	7	1	3
Teacher (Public School)	2	13	0	1	4	8	1	5

TABLE 20

Mean Difference and Direction (+ or —) of Estimates of Client's Potential for Job Placement, by E and C, by Professional, from Appraisal to Reappraisal (Unit II)

Professional	E		C	
	Mean Difference	Direction	Mean Difference	Direction
Counselor (Rehab. Agency)	16.7	+	6.2	+
Counselor (DVR)	6.2	—	6.2	—
Psychologist	8.3	+	3.1	+
Teacher (Public School)	6.7	—	3.6	—

TABLE 21

Mean Difference and Direction (+ or —) of Estimates of Ability to Maintain a Job Once It Is Obtained, by E and C, by Professional, Appraisal to Reappraisal (Unit II)

Professional	E		C	
	Mean Difference	Direction	Mean Difference	Direction
Counselor (Rehab. Agency)	6.7	+	3.1	—
Counselor (DVR)	1.6	—	3.1	+
Psychologist	6.7	+	3.1	+
Teacher (Public School)	1.7	—	5.4	—

TABLE 22

Mean Difference and Direction (+ or —) of Estimates of Realism of Occupational Expectations, by E and C, by Professional, Appraisal to Reappraisal (Unit II)

Professional	E		C	
	Mean Difference	Direction	Mean Difference	Direction
Counselor (Rehab. Agency)	11.7	+	12.5	+
Counselor (DVR)	15.6	—	15.6	—
Psychologist	8.3	+	9.4	+
Teacher (Public School)	No item		No item	

TABLE 23

Total Number of Contacts Required to Achieve One Followup Interview for Each Mentally Retarded Student

	Phone	Letters	School Visit	Home Visit	Collateral	Total
Experimental	5	15	5	6	21	52
Comparison	3	17	7	15	39	81
Totals	8	32	12	21	60	133

TABLE 24

Neurological Classification of "Emotionally Disturbed"

Classification	Number	Percent
Evidence of brain damage	6	15
Immature nervous system	19	47
Normal neurological development	15	38
Totals	40	100

TABLE 25

Rehabilitation Center Attendance of "600" School Experimentals

	Possible Attendance Days	Recorded Absentee Days	
	Number	Number	Percent
Boys	1,045	285	27
Girls	949	313	33
Totals	1,994	598	30

TABLE 26

Number of "600" School Students Appraised and Reappraised

	Appraised	Reappraised
Experimental	24	24
Comparison	27	18
Totals	51	42

TABLE 27

Psychological Testing Data on E's and C's at Appraisal and Reappraisal

(Unit III; E's = 24; C's = 13)

	Appraisal		Reappraisal	
	E's	C's	E's	C's
WISC I.Q.:				
Verbal (Mean)	84.8	85.5	86.3	85.8
Performance (Mean)	86.6	83.8	88.9	87.9
Full Scale (Mean)	84.2	83.8	86.6	85.8
Reading (Grade Placement)	5.0	4.3	5.6	4.8
Arithmetic (Grade Placement)	4.5	4.4	5.1	4.7

TABLE 28

Amount and Direction (+ or —) of Total Scale Mean Scores from Appraisal to Reappraisal, by Professional, by E and C

(Unit III)

Professional	E's			C's		
	N	Mean Change	Direction	N	Mean Change	Direction
Counselor (Rehab. Agency)	20	2.6	+	4	1.9	—
Counselor (DVR)	24	2.4	—	17	0.5	—
Psychologist	23	3.1	+	15	3.3	+
Psychiatrist	23	1.9	+	13	2.8	+
Teacher (Public School)	22	2.1	+	17	3.8	+

TABLE 29

Number of Persons, by E or C, Who Show Increases (+), Decreases (—), No Change (0), and Who Were Not Available for Reappraisal, from Appraisal to Reappraisal, by Professional Doing the Rating (Unit III)

Professional	E				C			
	+	—	0	NA	+	—	0	NA
Counselor (Rehab. Agency)	10	8	2	2	2	2	0	23
Counselor (DVR)	7	13	4	0	6	8	3	9
Psychologist	12	8	3	1	11	4	0	11
Psychiatrist	12	11	0	1	9	4	0	14
Teacher (Public School)	13	9	0	2	8	9	0	10

TABLE 30

Mean Difference and Direction (+ or —) of Estimates of Client's Potential for Job Placement, by E and C, by Professional, from Appraisal to Reappraisal (Unit III)

Professional	E		C	
	Mean Difference	Direction	Mean Difference	Direction
Counselor (Rehab. Agency)	15.0	+	?[a]	?[a]
Counselor (DVR)	1.0	+	7.4	+
Psychologist	7.6	—	3.3	—
Psychiatrist	5.4	+	3.8	+
Teacher (Public School)	1.1	—	15.0	—

[a] Only 4 C's returned for Agency Reappraisal.

TABLE 31

Mean Difference and Direction (+ or —) of Estimates of Ability to Maintain a Job Once It Is Obtained, by E and C, by Professional, from Appraisal to Reappraisal (Unit III)

Professional	E		C	
	Mean Difference	Direction	Mean Difference	Direction
Counselor (Rehab. Agency)	2.5	+	?[a]	?[a]
Counselor (DVR)	4.2	—	7.4	—
Psychologist	1.1	—	0.0	
Psychiatrist	3.3	+	13.5	+
Teacher (Public School)	4.5	—	16.2	—

[a] Only 4 C's returned for Agency Reappraisal.

TABLE 32

Mean Difference and Direction (+ or —) of Estimates of Realism of Occupational Expectations, by E and C, by Professional, from Appraisal to Reappraisal (Unit III)

Professional	E		C	
	Mean Difference	Direction	Mean Difference	Direction
Counselor (Rehab. Agency).....	11.2	+	?[a]	?[a]
Counselor (DVR)	29.2	—	8.3	—
Psychologist	7.6	—	3.3	—
Psychiatrist	3.3	—	9.6	+
Teacher (Public School)........	No item		No item	

[a] Only 4 C's returned for Agency Reappraisal.

TABLE 33

Total Number of Contacts Required to Achieve One Followup Interview for Each "600" School Student

	Phone	Letters	Telegram	School Visit	Home Visit	Office Visit	Collateral Contacts	Total
Experimental	35	15	2	1	22	9	26	110
Comparison	45	11	0	0	35	5	17	113
Totals	80	26	2	1	57	14	43	223

TABLE 34

Socioeconomic Distribution of Families in All 3 Units

	Prof.-Exec., Semiprof.		Skilled, Semiskilled, Manual		Unskilled		Total	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Unit I								
Physically Disabled	19	35.2	27	50.0	8	14.8	54	100
Unit II								
Mentally Retarded	3	8.8	13	38.2	18	53.0	34	100
Unit III								
Emotionally Disturbed	4	8.0	25	50.0	21	42.0	50	100

TABLE 35

Estimate of Family Disorganization
All 3 Units

	Highly or Moderately		Mildly or Not		Total	
	No.	Pct.	No.	Pct.	No.	Pct.
Unit I						
Physically Disabled	8	14.8	46	85.2	54	100
Unit II						
Mentally Retarded	12	35.3	22	64.7	34	100
Unit III						
Emotionally Disturbed	22	44.0	28	56.0	50	100

TABLE 36

Number Reevaluated — Study Group I — Spring 1964

Unit	Initial Evaluation		Reevaluation	
I. Physically Handicapped	50		50	
Experimental		27		27
Comparison		23		23
II. Mentally Retarded	35		32	
Experimental		16		16
Comparison		19		16
III. "Emotionally Disturbed"	51		42	
Experimental		24		24
Comparison		27		18
Totals	136		124	

TABLE 37

Neurological Classification of Mentally Retarded and Emotionally Disturbed

	M.R.	E.D.	
	Unit II	Unit III	Total
a. Evidence of brain damage	5	6	11
b. Immature nervous system	14	19	33
c. Normal neurological development	5	15	20
Totals	24	40	64

TABLE 38

Mean Reading Grades for Combined Study Sample, Experimental and Comparison

	Appraisal	Reappraisal
Unit I — Physically Handicapped	5.3	6.1
Unit II — Mentally Retarded	2.9	3.2
Unit III — "600" Schools	4.6	5.2

APPENDIX A

HANDICAPPED STUDENTS RESEARCH PROJECT

Interviewer ....

FOLLOWUP SCHEDULE

Date of
Interview ....
(Month) (Day) (Year)

Study Group................

Unit............... Group E; C (encircle one)

Name .... Sex (circle): M; F

Address .... Phone ....

Place of Birth.. Birthdate ....

Number of Years in N.Y.C..................

A. Employment Status (if not in school)

1. When did you leave school?..
2. Why did you leave school?..
....
....
3. Are you working now? Yes........ No........ (if No, skip to Question No. 16)
4. What kind of job is it? (gross job description)
....
....
....
5. Date job was obtained?..
6. Pay (before taxes, by week or by hour, whichever appropriate)
....
7. Hours ....
8. Steady, Seasonal, or Temporary (encircle one)
9. How did you find this job?
....
10. How well are you doing at this job?
............Very good ....Better than average
............Just average ....Not very well

11. Have you had any promotions or wage increases?
Promotions: ....Yes ....No
Wage Increases: ....Yes ....No

12. How much ability do you think it takes to do the kind of work you do?
............A lot of ability ....Some ability
............A little ability ....No ability

13. Do you like this job?
............Very much ....Somewhat
............Not too much ....Not at all

14. What are your chances for advancement or promotion on this job in the next year?
............Pretty good ....Maybe ....Not good

15. What are your chances for a raise in the next years?
............Pretty good ....Maybe ....Not so good

* * * * * * *

16. Have you ever worked since you left school? ....Yes ....No

17. Get information on: (a) number of jobs held; (b) duration of each job; (c) why left? (Write on back, if necessary)
....
....
....
....

18. (If not working) Are you looking for work? ....Yes ....No
(If no) Why not..
....
....

19. What kind of job would you like to have?
....
....
....
....

20. (If not working) Source of support:
............Family ....Unemployment insurance
............Relief ....Other

21. How have you gone about looking for work? (Explore)
....
....
....
....
....

22. Have you ever heard of:
............State Employment Service ....JOIN
............Mobilization for Youth ....Haryou-Act
............Youth Employment Program ....Other

23. Would you be interested in getting help from any of these organizations in finding a job?
....
....
....
....

24. Since you left school, have you:
   a. Had any other vocational training: ....Yes ....No
   b. Been at any other agency: ....Yes ....No

Comments: ....
....
....
....

B. Family Relations

1. Who are you living with at present? (Indicate roles, e.g., father, stepfather, mother, aunt, etc.) [If not living with relative skip to No. 5.]
....
....
2. (If living with father or father-surrogate) How do you get along with..............................?
............Very well ....Pretty well ....Not too well ....Badly
3. (If living with mother or mother-surrogate) How do you get along with..............................?
............Very well ....Pretty well ....Not too well ....Badly
4. (If living with other relative) How do you get along with..............................?
............Very well ....Pretty well ....Not too well ....Badly
5. (If not living with relative) Who are you living with now?
............Alone ....A Friend(s) ....Spouse
6. How do you get along with..............................?
............Very well ....Pretty well ....Not too well ....Badly
7. Have there been any important changes in your family during the last year? (Probe for major changes, e.g., deaths, relief status, trouble with Courts or Law, etc.)
....
....
....
....
....

C. Interpersonal Relations
(Other than Family)

1. Do you have many friends?
   a. Same sex friends:
   ....Enough ....Too few ....None
   b. Opposite sex friends:
   ....Enough ....Too few ....None
2. (If not married) Do you go out on dates?
   ....Enough ....Too few ....None
3. Do you go to parties?
   ....Enough ....Too few ....None
4. (If not married) Are you going steady with anyone?
............Yes ....No

5. What do you do with your spare time? (Use codes: 1. almost every day, 2. once or twice a week, 3. once or twice a month, 4. rarely or never)
............Listen to the radio
............Watch TV
............Read magazines or newspapers
............Read books
............Go to the movies
............Go to sport events
............Go to church (synagogue)
............Participate in athletics
............Have hobbies
............Play an instrument
............"Just hang around"
............Play cards
............Other (Specify):
....
....

6. Do you feel you don't have much to do with your spare time?
............Yes ....No (Get comment, if possible):
....
....
....
....

D. School

(For those still in school)

1. How are you getting on in school?
............Very well ....Pretty well ....Not too well ....Badly
2. Do you expect to get a high school diploma?
............Yes ....No ....Don't know
3. (If yes to No. 2) Do you expect to go on to:
............College ....Business school ....Trade or technical school
............None ....Type of school..
4. (If no to No. 2) Would you want any special schooling?
............Business school ....Trade school ....None
Other ....
5. Do you think you want any special help in order to do better in school?
............Remedial Reading ....Remedial Math ....None
Other ....

E. Miscellaneous

1. During the last year, have you had any serious illness?
............Yes ....No
(If yes, explore for nature, whether client hospitalized, any residuals, etc.)
....
....
....
....
....

2. Have you had any trouble with the Law or the Police? (Explore, while assuring confidentiality) ____________________
____
____
____

F. Reactions to Program

(For clients who dropped out before end)

1. Why did you drop out?
____
____
____
____

2. Were there things about the program that you liked?
____
____
____
____
____

3. Were there things you didn't like?
____
____
____
____

G. Interviewer's Impressions

(As client might impress a prospective employer)

1. Grooming
..........Well groomed
..........Above average
..........Below average
..........Poor
Comment ____________________

2. Physical attractiveness
..........Very attractive
..........Above average
..........Unattractive
..........Below average
Comment ____________________

3. Ability to communicate
..........Easily understood
..........Occasionally has difficulty in getting meaning across
..........Considerable difficulty in getting meaning across
..........Very hard to understand

4. Comprehension
..........Has no difficulty in understanding you
..........Occasionally needs explanations, etc.
..........Frequently needs explanations, etc.
..........Great difficulty in understanding you

5. **How aware would the average employer be that the individual has physical, mental or emotional problems?**

	Physical	*Mental*	*Emotional*
Highly aware:	....	....	....
Somewhat aware:	....	....	....
Unaware:	....	....	....

6. **Additional impressions**

....
....
....
....
....
....
....
....
....

7. **Any other relevant information known about the client.**

....
....
....
....

APPENDIX B

NOTE: A variation of this rating scale was also completed for each student by the psychologist, the teacher, the rehabilitation agency counselor, and the psychiatrist.

Counselor Scale I: Initial Interview and Home Visit

A. *Family Attitudes to Handicapped Child*

1. Degree to which family actively supports (or impedes) child's efforts to cope with general problems of living:
   ....Strongly supportive
   ....Moderately supportive
   ....Mildly supportive
   ....Neutral; neither supportive nor impeding
   ....Mildly impeding
   ....Moderately impeding
   ....Strongly impeding
2. Degree to which child has been prevented from engaging in activities appropriate for nonhandicapped children because of family overprotection:
   ....High
   ....Moderate
   ....Mild
   ....Not significant or absent
3. Degree to which child has been prevented from engaging in activities appropriate for nonhandicapped children because of family rejection:
   ....High
   ....Moderate
   ....Mild
   ....Not significant or absent
4. Degree to which family expectations for child are unrealistically high or low:
   ....Very much higher than is appropriate
   ....Moderately higher
   ....Mildly higher
   ....Appropriate; neither too high nor too low
   ....Mildly lower than it should be
   ....Moderately lower
   ....Very much lower
5. Attitude of family to issue of whether child should be committed to an institution:
   ....Strongly in favor
   ....Moderately in favor
   ....Mildly in favor

................Neutral
................Mildly opposed
................Moderately opposed
................Strongly opposed

6. Attitude of family to DVR program:
................Strongly in favor
................Moderately in favor
................Mildly in favor
................Neutral or indifferent
................Mildly opposed
................Moderately opposed
................Strongly opposed

B. *Characterization of Family as a Psychosocial Unit*

7. Degree to which family unit is socially disorganized, i.e., provides an unfavorable home atmosphere for ordinary child-rearing:
................Highly disorganized
................Moderately disorganized
................Mildly disorganized
................Not disorganized

8. Degree of activity of father in relation to child-rearing practices:
................High activity
................Moderate activity
................Minimal activity
................No activity

9. Degree of activity of mother in relation child-rearing practices:
................High activity
................Moderate activity
................Minimal activity
................No activity

10. Degree of activity of father in relation to child's problems and needs:
................Very highly involved
................Moderately involved
................Mildly involved
................Not involved

11. Degree of activity of mother in relation to child's problems and needs:
................Very highly involved
................Moderately involved
................Mildly involved
................Not involved

12. Economic status of family by occupation of father (or mother, if latter is sole support):
................Professional and executive
................Semiprofessional and managerial
................White collar (Clerical, retail sales, etc.)
................Skilled manual
................Semiskilled manual
................Slightly skilled manual
................Unskilled manual

C. *Attitudes of the Handicapped Child*

13. How does the child perceive the father in relation to himself:
................Highly positive figure
................Moderately positive
................Mildly positive
................Neutral or indifferent
................Mildly negative
................Moderately negative
................Highly negative

14. How does the child perceive the mother in relation to himself:
................Highly positive figure
................Moderately positive
................Mildly positive
................Neutral or indifferent
................Mildly negative
................Moderately negative
................Highly negative

15. How does the child perceive his siblings in relation to himself:
................Highly positive figure
................Moderately positive
................Mildly positive
................Neutral or indifferent
................Mildly negative
................Moderately negative
................Highly negative

16. How does the child perceive his nonfamilial age peers in relation to himself:
................Highly positive figure
................Moderately positive
................Mildly positive
................Neutral or indifferent
................Mildly negative
................Moderately negative
................Highly negative

17. To what degree does the child perceive himself as damaged:
................Very
................Moderately
................Mildly
................Not at all

18. Degree to which the child's occupational expectations are unrealistically high or low:
................Very much higher than is appropriate
................Moderately higher
................Mildly higher
................Appropriate; neither too high nor too low
................Mildly lower than it should be
................Moderately lower
................Very much lower

D. *Assessment by Counselor of Vocational Potential of Child at Employable Age:*

19. Placeability, i.e., amount of effort required to be placed on a job regardless of whether the job is kept:
    - ....Highly placeable; comparatively easy
    - ....Moderately placeable; position can be found, but with some difficulty and delay
    - ....Minimally placeable; great difficulty in placing; includes limitation to sheltered employment
    - ....Unplaceable

20. Adjustability, i.e., if a job can be found, client will be able to meet job demands and maintain employment:
    - ....High employment maintenance (employed at least 75 percent of followup period)
    - ....Moderate employment maintenance (25–74 percent)
    - ....Low employment maintenance (1–24 percent)
    - ....No maintenance (employed only for day or two at a time)

21. Potential for Training, i.e., individual will be rendered employable through specific vocational training:
    - ....High likelihood
    - ....Moderately high likelihood
    - ....Little likelihood
    - ....No likelihood

APPENDIX C

New York State Education Department
Division of Vocational Rehabilitation

HANDICAPPED STUDENTS RESEARCH PROJECT

Outline for Agency Reports (at end of each semester)

Objective is to write a brief narrative report on progress of client in the adjustment training program. Focus should be on both assets and liabilities of client as these change (if they do) during the project period. The report is to be made 3 times: at end of first semester, at end of second semester, and at end of total service. The final report should cover entire service period and constitute a summary of client progress. The reader of these reports should be able to make judgments concerning the following issues:

(1) How " far " is the client from being able to meet ordinary work pressures and work demands?
(2) What progress has the client made during preceding period in closing the gap?
(3) What are the main work problems of the client?
(4) What plans should be adopted to cope with these problems?
(5) What progress has been made in areas not related to work *per se*?
  a. In the area of social competence with peers?
  b. In the area of family adjustment?
  c. In appearance, dress, and deportment?
  d. In self-image and self-acceptance?
  e. In general emotional maturation.

For clarity, the report should be organized under these headings:

I. Work Performance
  A. Quantity
    Relation to acceptable industrial standard
  B. Quality
    Relation to acceptable industrial standard
II. Supervision
  Does client need more than the ordinary amount of supervision?

Under what kind of supervision does client work best: benign, matter-of-fact, controlling? In what areas of work is supervision most needed [see I, above]? What problem does client have in accepting and using supervision?

III. Peer Relationships
Does client display appropriate relationships with co-workers? If not, what are the problems?

IV. Meaning of Work
Motivation? Interest? Values?

V. Work Behavior
What are client's main work problems? Punctuality? Distractability? Low output? Poor quality? Inappropriate attitude to supervisor? Disturbing peer relationships? Others?

VI. Behavior Not Specifically Related to Work
Has program helped client to form positive social relationships in the community and school? Is he seen as a more effective and adequate member of the family? Are there any changes to be reported in dress and deportment? Has the client been helped to mature as a person, in relation to such issues as impulse-control, feelings of independence, self-acceptance? What are the main problems you see in these areas which require further attention?

In writing this report, it should be noted that the project is interested in brief, concise statements, which are capable of being coded and classified. On the other hand, the project wishes each agency to utilize whatever latitude it wishes in developing what is an essentially *qualitative* report of progress: what was the client like at the beginning of the period? What are his chief characteristics now? Where is he going? It is believed that this material can be an important supplement to the various scales and can lay the basis for individual evaluation on a case-by-case basis. At the same time, we wish to emphasize that we are not requesting from the agencies long and detailed case histories. The writer should aim for *compact* statements under each of the six headings, emphasizing the chief characteristics and problems.

[Submit all reports to Morris Klapper, Project Director]

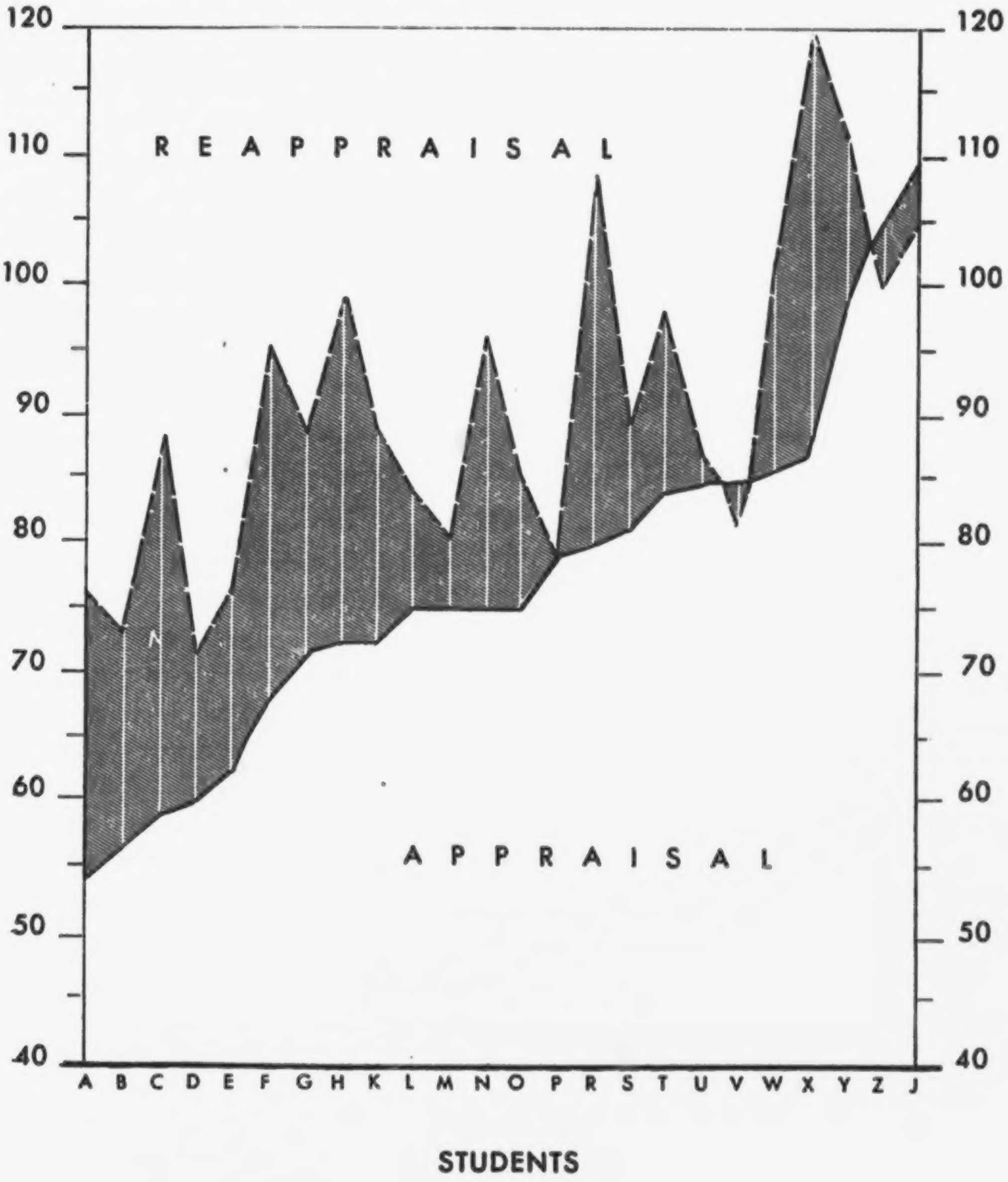
Reports are due:

1. July 10, 1963
2. February 10, 1964
3. July 10, 1964

APPENDIX D-1

Study Group I — Unit I, Experimental

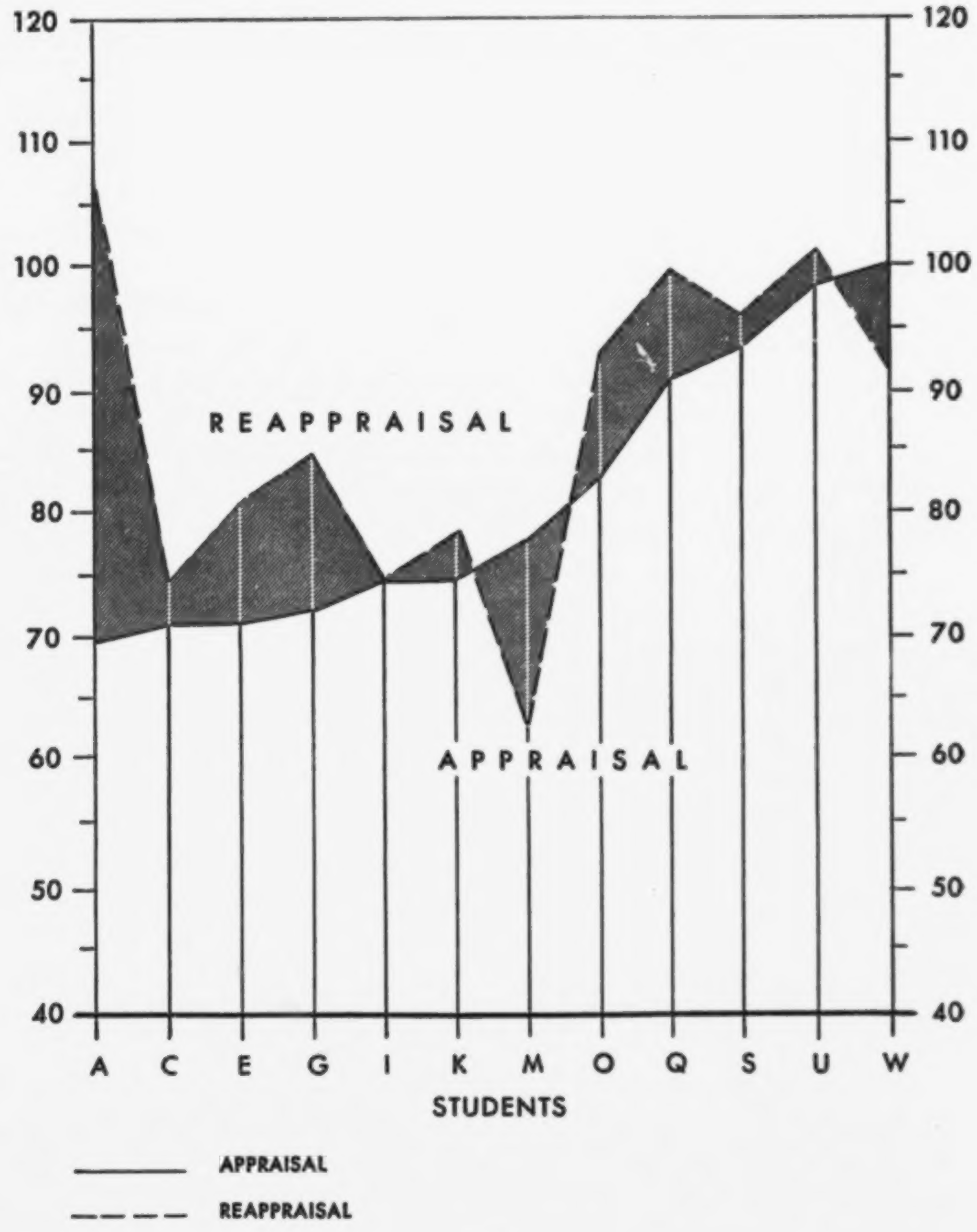
Changes in Psychological Full Scale Scores from
Appraisal to Reappraisal, 1962–64



APPENDIX D-2

Study Group I — Unit I, Comparison

Changes in Psychological Full Scale Scores from
Appraisal to Reappraisal, 1962–64



APPENDIX E

Evaluation of Nervous System in Mentally Retarded and "600" School Students in the Handicapped Students Research Project

By David Biser, M.D.

Introduction:

A neurological screening was done on a total of 40 students in the group of students with behavior problems attending the "600" schools and a total of 24 students in the mentally retarded group. The "600" school group included 20 girls and 20 boys. The mentally retarded group included 17 girls and 7 boys.

The screening was approached with a view to compare the two groups with one another. The two groups differ from one another in two respects. The mentally retarded are so designated in that on group testing their total I.Q. score was rated below 70, whereas, the "600" school group all scored above this level on group testing. The "600" school group differed in the existence of a severe behavior disturbance in contrast to relatively minor behavior problems in the mentally retarded group. The common denominator that characterizes both groups is the presence of a severe retardation in learning.

It was therefore decided that the neurological evaluation should be approached not simply for the purpose of determining if, or which children showed objective signs of "brain damage," but that there be a more detailed appraisal to determine, if possible, the maturity or functional organization of the nervous system in each child. The children are, therefore, categorized as:

(1) Showing evidence of brain damage
(2) Showing neurological signs of immature nervous system development
(3) Normal degree of development.

Description of Examination:

The evaluation consisted of a neurological examination with no special studies having been done to this date and without a neurological history with the exception of some children who volunteered specific subjective symptoms.

In addition to the routine neurological examination, particular attention was given to the following:

The child was carefully observed for any physical stigmata. This included any asymmetry or deviation of skull size or shape, peculiar facial structure, and peculiarities of digits.

The postural organization was carefully appraised. This examination included modifications of techniques as elaborated by L. Bender, P. Twitchell, de Hirsch, Goldfarb, etc., in their examination of children. Included are such observations as independence of passive head movement from body movement, positioning and deviation of outstretched arms, independence of head movement from eye movement, significant lordosis when arms are outstretched with eyes closed, marked flexion or extension of head or turning of head to one side with eyes closed, muscle tone, etc.

Under the category which may be described as kinesthesia were included such observations as spontaneous involuntary muscle activity, synkinetic movements, asymmetry of arm movement in walking. Particular attention was paid to choreiform movements by observations and palpation of muscles as described by Prenzl and Anderson in their study of hyper-kinetic children and children with learning retardation.

Under the category of eye motility are included any strabismus, exophoria or exotropia, lag or marked weakness of one or both eyes in convergence, tonic positioning of eyes when closed and lids are passively elevated. Also included are ability to fix gaze with passive head turning, with head in various positions and fixation in active gaze on command or following. The examination for tonic deviation of eyes is a modification of examination of observation technique as described by Cogan.

Under the category of distal motility is included the rate and rhythm of opposition of thumbs to individual fingers of each hand with eyes closed, amplitude and tone of opening and closing fists, alternate supination and pronation of hands, and flapping movements of hands. Particular attention is given to the independence of finger movements from proximal movement at elbow and shoulder joints and positioning of extremities in performing these tests. Observation of independence of distal movements from proximal activity has been described by Gessell and others as part of neurological maturational process.

Laterality includes observations of hand preference in pointing to body parts, preferred side of body in pointing to body parts, tendency to identify body parts by crossing over or by ipsilateral identification spontaneously and on command. This includes orientation in terms of a child's ability to recognize examiner's corresponding hand, and ability to correctly name " right " and " left " on the examiner's body parts and himself. These observations are modifications of examination techniques of Benton, Drews, and others.

Finger localization also is a modification of Benton's examinations for finger localization. It includes ability of child to point to finger tips of two fingers which are touched simultaneously or in sequence, and ability to transfer localization to opposite hand with eyes closed.

There were other examination techniques in addition to the routine neurological examination, including ability to perform bilateral circular movements going in one direction and performing circular movements with one hand and then the other with instructions to continue movements in same direction with opposite hand. Notation was made if there was reversal of direction or any significant deviation from circular pattern of movement. Other observations, such as preferred direction of body rotation, preferred foot in hopping, gaze preference in bilateral finger to nose test, preferred direction of movement of mental image of midline object, etc., may be of interest, but are not included in the results of this evaluation. The categories described, in addition to the routine neurological examination, were found to be the criteria which gave the most valuable information in terms of overall functioning of the nervous system.

The classification of brain damage vs. immaturity of nervous system development is not meant to construe severity of malfunction. As mentioned in Goldfarb's book " Childhood Schizophrenia," the neurologist is faced with the problem of seeing what may be profound disturbance of nervous system functioning where classical signs of brain damage are lacking. He is not able to delineate a specific location of brain damage, a specific cause or specific system of nervous system pathways. Yet, there may be greater disorganization than in the child classified as " brain damaged." One may find a completely normal neurological examination with the exception of, for example, an extensor response to plantar stimulation, yet the child would be classified as brain damaged. A child may, on the other hand, show numerous disturbances of posture, kinesthetic activity, eye movement, disorientation of laterality, etc., so that he would be likely to have greater repercussions in his learning ability than a child classified as brain damaged. Children in whom there were equivocal signs indicative of brain damage, for example an inconsistent equivocal extensor response, cannot be categorically spoken of as being brain damaged. Neither can such a child be designated " immaturity of nervous system development;" he would be placed in a normal category.

An attempt to spell out the examiner's impression of the severity of malfunction is offered by rating the children in a scale from 0 to 4. Zero designates a normal neurological examination in terms of examiner's impression of maturity for the student's age. A +4 would indicate severe disturbance of function as judged by the examination, regardless of whether there is, or is not, brain damage.

It should be emphasized that rigid criteria were used in determining whether the child was placed in the category of brain damage. The category of immaturity of nervous system development suffers from the fact that this study was not a comparison or controlled study with a "normal" group of children. The examining neurologist used a modification of examination techniques generally applied to young children. In some categories it may well be that the criteria used were too rigid, and that a similar instance of "immaturity" might be found in a normal population group. Nevertheless, the findings are of significance in terms of a comparison of the mentally retarded and "600" school groups.

The evaluation of brain damage is based solely on the findings of one examination, without the benefit of a detailed history of prenatal, perinatal, and early childhood development. It seems likely that with an elaborate history more children would be included under this category, especially where equivocal neurological findings were found.

Results:

Forty students (20 girls, 20 boys) of the "600" school group and 24 students (7 boys, 17 girls) of the mentally retarded group were examined. Six of the 40 "600" school group (3 boys, 3 girls) and 5 of the 24 mentally retarded group (1 boy, 4 girls) showed objective findings indicative of some nervous system damage.

"600" School Group:

Among the boys, one student, C.B., showed a consistent extensor response of the left big toe in testing for Oppenheim's sign, in contrast to a consistent downward response on the right side. Student volunteered information that there had been periodic short lapses of consciousness on the average of once monthly, with a temporary loss of memory for what would have occurred during these lapses. There were suggestions of olfactory hallucinations or illusions (smell of burnt rubber), also a history of former severe right-sided head pain.

L.C., who has a right-handed preference in daily activities but who consistently uses his left in writing, showed extension and fanning of toes on the left when testing for Babinski and Oppenheim sign, in contrast to a consistently downward response on the right side. He was virtually unable to converge with either eye in following a moving object brought toward his nose. There were piano-type movements of the fingers when upper extremities were extended, and slight jerky movements of the facial muscles. There was prominent spooning (wrist flexion with hyperextension of digits) with arms outstretched. In rotating he turned very rapidly with deviation of arms to one side in turning to the left, with no such deviation noticeable in turning to the right.

J.K., showed a virtual paralysis of the right upper extremity with a sensory loss extending from C5 through C8. To his knowledge this was present since birth. The objective findings strongly suggested damage to the right brachial plexus. In addition, there was skull asymmetry with mild skull depression in the left parietal region as compared with the right. Funduscopic examination showed a prominent pale, avascular area in the center of the right disk, and it appeared that the only vessel going to the center of the disk was a large superior vein. Veins of the left disk appeared very prominent. There seemed to be less prominence of the right naso-labial fold as compared with the left. The objective findings showed a definite pathology of the brachial plexus and, although there was no definite evidence of any brain damage, the abovementioned findings raise a strong possibility of some intercranial pathology.

Among the girls, A.D. showed a definitely more active triceps, biceps, and radial periosteal reflex on the left side as compared with the right, and a left knee jerk consistently more active than the right. Plantar response on the left was not as vigorous as on the right. She does many activities with her right hand but apparently shows more of a preference for her left hand.

E.C. showed very prominent spontaneous and involuntary movements. There was pronounced irregular movement of the outstretched fingers and up and down jerking movements of the proximal portion of the outstretched upper extremity. There was considerable perioral muscular activity and considerable involuntary tongue movement. There were palpable clonic jerks of muscles of the posterior neck region and similar palpable jerks of the biceps muscles and tendons. There was an inability to consistently fix her gaze when her head was passively rotated. In attempted convergence, the right eye moved out. There was prominent twisting and tilting of the head in walking. There was much synkinetic muscular activity, such as in doing thumb to finger apposition on one hand. There was overflow to the opposite hand, with quivering movements of the mouth and tilting of the head.

C.J. showed prominent involuntary movement. There was involuntary jerking of the body musculature, and of the head on passive head movement. In gazing laterally, there was also considerable irregular head movement. There was very little movement on attempted convergence of the eyes. She was very sensitive to light, so that pupillary reactions and funduscopic could not be done. There were postural aberrations — her arms drifted downward rapidly, there was marked spooning at the wrist joints and her digits showed a structural deviation, and there was a turning outward of the distal portions of her fingers. This was also present in the toes. The left knee and ankle jerks were more active than on the right.

Mentally Retarded:

R.G. showed numerous and very gross abnormalities of nervous system development. His skull appeared narrow as compared with facial width, ears were long and " rabbit-like." Digits were very short and stubby compared with body size. Obese and rather eunuchoid appearance. Skin rather flabby and soft. There was marked restriction of upward gaze, prominent saccadic movement of eyes, prominent lateral displacement of the left eye (virtually no vision except to light in left eye, severe disturbance of acuity in right eye). There was considerable awkwardness in performing distal movements. Movements generally are excessive in rapidity and force and tend to be imprecise. There was marked postural disturbance. In passive head movement, there was very marked simultaneous turning of the entire body. There was poor establishment of hand preference and there was disorientation of laterality (identification of right-left) for the environment.

M.G., a girl, showed much fine movement of fingers in walking, with sudden thrusts of wrists in finger extension. There was irregular shifting movement of the head. There were jerky movements of muscles in the forehead throughout the examination, and grimacing peri-oral movements. There were prominent piano-type movements of the outstretched fingers. Her outstretched arms drooped after rotating. There were fine irregular movements of the eyes in left and right lateral gaze. She was unable to keep her eyes in a left lateral gaze position with eyes closed; the eyes deviated to the right when closed. There was much overflow of movement into the fingers of the opposite hand in doing unilateral thumb to finger opposition. Pupils were very sluggish. No deep tendon reflexes could be elicited, even with reinforcement.

A.M., a girl, showed obvious physical stigmata, including snout-like appearance of mouth, asymmetry of facial structure, and a diminished size of paretic right upper extremity. Her body turns completely in testing lateral eye movements by passively rotating her head. There was virtual paralysis of the right hand and fingers. There was complete right-left confusion for herself and for her environment. Speech was dysarticulate. There was an apparent hearing defect bilaterally when tested by whispered voice. She could not perform tandem walking. She was irritable and tolerated the examination poorly.

V.G., a girl, showed considerable pursing movements of the lips and surrounding peri-oral muscular activity. With arms outstretched, her arms moved promptly downward when she rotated. There was markedly diminished resistance to passive rotation of the head with simultaneous turning of body. There was frequent misplacement on either hand ipsilaterally for finger localization and frequent reversal of sequence both ipsilaterally and contralaterally. She was unable to perform thumb to finger opposition consecutively, over and over again. She was unable to perform tandem walking with her eyes closed. She walked with a slightly shuffling gait in that her toes were placed on the ground before her heel.

C.R., a girl, showed considerable flexion of wrists with arms outstretched. The left eye did not converge. At another time, the right eye failed to converge. There was much overflow into the opposite hand in doing unilateral thumb to finger opposition. She was very inconsistent in identification of her own right and left and similarly, inconsistent in right and left identification of the environment. There was a definite extensor response to plantar stimulation on the right side. There was a significantly lower facial asymmetry with virtual absence of the right nasolabial fold.

The examining neurologist attempted to rate each child on a scale from 0 to 4, the numbers ranging from "normal" to "severe disturbance of nervous system functioning" of each child. This was based purely on the results of the neurological examination. It is obvious that a child may show little in the way of objective abnormal signs and yet have marked disturbance of function. For example, one student, C.B., was considered to show objective signs of brain damage in that there was a pathological reflex unilaterally, so that he was given a rating of 2. The student has suffered from lapses of consciousness, has had suggestive olfactory hallucinations, which strongly suggest some seizure disorder, so that his functioning in terms of learning and behavior may be quite severe as a result of nervous system pathology, but this cannot be determined by the neurological examination alone. These ratings can only be meaningful when the examination itself showed significant objective abnormalities. The presence of negative or minimal findings in no way are meant to convey the impression that there may not be greater disturbance of functioning.

Among the students with behavioral disturbances one student, C.B., was given a rating of 2, L.C. 2, and J.K. 2. Among the girls in this group, A.D. was rated as 2, C.J. 3, and E.C. 3.

Among the mentally retarded students, R.G. was rated as 4, A.M. as 4, M.G. 3, V.G. 3, and C.R. as 3.

Immaturity of Nervous System:

Of the 40 students with behavioral disturbances, 19 (8 boys and 11 girls) showed objective signs of what the neurologist interpreted as being indicative of immaturity of nervous system development. Among the 24 mentally retarded, 14 (4 boys and 10 girls) were so designated. Most of these students were given low ratings of one or two. Students were not designated as showing immaturity of development unless there was some objective finding in more than one of the categories previously mentioned (postural organization, kinesthesia, eye movements, etc.). Again, it is emphasized that these findings may have greater significance, but in the absence of a control group, it may well be that some of the criteria designated as not normal would be found in a normal control group.

A complete breakdown for each child under the category of immaturity will not be given here, but examples will be given to illustrate criteria for placing a child in this category and also to illustrate the basis for rating from 0 to 4.

M.C. was rated at 3. "In walking head is consistently limply tilted to one side. No arm swing in walking, arms pronated forward and close to her body. Irregular forward thrust of the left arm. Marked postural aberration, often tends to or must support her head with her hands when her eyes are closed. Very marked lordosis with arms outstretched and eyes closed, wrists limply flexed, elbows at side in flexed position. In active gaze there is uneven eye movement — head had to be held by examiner to satisfactorily allow her to move her eyes, otherwise she tended to discontinue attempts at gaze in various directions. Left eye converges, right eye does not. In hopping, her movements are very rapid. In thumb to finger opposition, she cannot maintain a distinct rhythm. Deep tendon reflexes not elicited in upper extremities. Very slight knee jerk elicited in lowers, only with reinforcement. In testing passive resistance by holding her wrists and pressing against her finger tips, her resistance was primarily with her shoulders and not with her fingers."

The examining neurologist felt that there simply was no clear-cut objective finding that could be considered as indicating definite brain damage. It could be seen, however, that her nervous system functioning was "not normal." On the basis of the examination alone, it was felt that she would very likely show much more disturbance in the area of learning than some of the students designated as brain damaged. It may well bethat she has suffered some specific damage, but this cannot be categorically stated on the basis of the neurological examination.

N.L., a girl in the mentally retarded group, was rated as 1. "In passively rotating head there is consistent greater movement of the arm opposite to the side of turning so that the opposite arm always moved closer to the arm toward which the head was rotated. She is left-handed. There was usually a reversal of right-left identification of body parts of the examiner, but no such reversal on her own body. In finger localization she usually showed a reversed sequence when fingers were touched in succession going toward the midline, that is, with her palms downward going in the direction from lateral to medium. In performing distal movements such as pronation-supination of hands, her thumbs were held in a flexed and adducted position and her movements tended to be to and from rather than supination and pronation. With her eyes closed and lids gently lifted, eyes were seen to be in a converged position."

The examiner considered that some of these findings, particularly the reversal of right and left, were immature for a 16-year-old girl. Actually, the reversal of right and left may have greater consequences for her learning, and in particular, her reading ability. The rating of 1 represents a minimal estimate of the degree of interference of learning as a result of nervous system immaturity.

Of those 19 children classified as neurologically immature, of the 40 behaviorally disturbed group, 2 were rated as 3. Of the 14 children designated as showing neurological immaturity, of the 24 mentally retarded group, 2 were given a rating of 3.

It should also be mentioned that in children who were not designated as showing signs of brain damage and immaturity, there were various findings that could be called immature, but the examining neurologist did not feel the total picture warranted designating a child under this category, especially without a control study.

For example, M.S. showed no abnormal or immature findings in the examination, except for a very consistent and very obvious difficulty in finger localization. In fact, his difficulty in this area was greater than many of the children who were classified as being neurologically immature. Since this was the only objective neurological finding, he was called " normal."

Other examples are: P.B., a girl in the behaviorally disturbed group, showed a lag of the right eye in convergence and inability to perform bilateral circular movements going in the same direction simultaneously. C.J., a girl in the behaviorally disturbed group, showed marked divergence of the eyes when the eyes were closed and lids were passively raised, and walks with her head held in a flexed position.

Comparison of " 600 " Schools and Mentally Retarded Groups:

The most striking objective findings were the very high number of what the examining neurologist considered as some abnormality of eye movements in both groups. A total of 24 of the 40 " 600 " school students and 15 of the 24 mentally retarded students showed some such aberrant manifestation of ocular movement. It is the neurologist's impression that this is considerably higher than would be found among a random population of students of this age.

Another striking finding was the presence of depression of deep tendon reflexes in the lower extremities, asymmetry or the presence of equivocal pathological reflexes. Among the 40 " 600 " school students, 22 were thus designated. Among the 24 mentally retarded students, 16 were thus designated. Four of the behaviorally disturbed students showed asymmetry in comparing reflexes in right and left extremities. Five among the mentally retarded students showed either asymmetry or equivocal pathological reflexes.

There was also a large number of students who showed difficulty with finger localization. Nineteen of the 40 " 600 " school students and 15 of the 24 mentally retarded students were thus designated.

A reversal of right and left for the environment or confusion were marked. Inconsistency for right and left was shown by 5 of the 40 " 600 " school students (all girls). Among the 24 mentally retarded students, 9 (7 girls, 2 boys) were so designated.

Four of the 40 " 600 " school students showed what the examiner considered some physical stigmata; 9 of the 24 mentally retarded students showed this.

Sixteen of the 40 " 600 " school students were felt to have some deviation under the category of postural organization; 11 of the 24 mentally retarded students showed this.

Ten of the 40 "600" school students showed some disturbance of distal movements; 11 of the 24 mentally retarded students demonstrated this.

Under the category of kinesthesia, that is, abnormal spontaneous movement, synkinetic movement or some abnormality of muscular activity was found in 6 of the 40 "600" school students and 8 of the 24 mentally retarded students.

In summarizing, it appeared that the similarity between the two groups was more striking than the differences. For almost all categories, the mentally retarded group showed a somewhat higher number of abnormalities, including number of students designated as brain damaged and neurologically immature. However, the general pattern of distribution of abnormalities seems to be rather similar in the two groups. That is, in those criteria which the mentally retarded showed a high number of aberrations, the behaviorally disturbed group showed a high number of abnormalities, likewise. The examining neurologist found the number of abnormalities for a group designated as behaviorally disturbed to be higher than would be expected. In other words, the neurologist was impressed with the fact that among these two groups of students who differed in respect to behavior and to intelligence as measured by group testing, one should look closely at the common factor of learning retardation as showing possible correlation with the common finding of a high number of neurological deviations common to both groups.

As has been mentioned, the neurologist may have been too rigid in defining "normal" or "mature" in certain categories, especially categories of finger localization and eye movement, so that some of these findings may not have the significance as has been interpreted in this report. That is, some of these findings may not be indicative of nervous system immaturity for this age group. This can only be determined by a comparison study.

Discussion:

A group designated as behaviorally disturbed and a group designated as mentally retarded showed one symptom in common, namely, learning retardation to a severe degree. This study raises the question of how many children in these two groups show such symptoms as a result of either actual brain damage or some disturbance of neurological development. The learning disturbance or the behavioral disturbance may, in some instances, be the direct result of brain dysfunction, either actual damage or immaturity of development. In other instances, it may well be that the particular symptom may be not the direct result of brain dysfunction, but secondary to some other disturbance caused directly by brain dysfunction.

For example, C.B., a behaviorally disturbed boy who has strong symptomatic evidence of a seizure disorder might well show impulsive eruptions of disturbed behavior directly as a consequence of his abnormal cerebral activity. Similarly, his learning might suffer directly as a consequence of brain damage.

Another boy in the behaviorally disturbed group, L.C., shows a peculiar preference for his left hand, only for the purpose of writing, in combination with other neurological findings such as a pathological reflex on one side. He is virtually a nonreader. It may be that his specific reading disability is the direct consequence of some disturbance of interhemispheric integration. His behavior, on the other hand, might well be secondary, not the direct result of his brain damage, but a consequence of his inability to read.

Among the mentally retarded students some may be mentally deficient, purely as a result of a random distribution of intelligence among the population. Some undoubtedly suffer as a direct result of brain pathology, and it is not unexpected to see five such children in this group. One must raise the question, whether in a significant number of children so designated, there is a severe learning retardation, not the result of any specific brain damage, nor as a population variable, but as either a direct or secondary result of what may be termed immaturity of brain development, without at this time attempting to delineate the specific cause.

L.M., a girl in the mentally retarded group, was not classified as being brain damaged. She was considered, on the other hand, to show rather severe disturbance of nervous system functioning, largely on the basis of marked disturbance of postural organization, ability to execute distal movements, finger localization, etc. It should be expected that in many of the areas of learning, she would be deficient, simply from the standpoint of her inability to apply herself in any motor activity at a normal level for her age. One would raise the question of whether the learning process would best be served by educating her as a mentally defective, with children who show mental deficiency, without the rather severe disturbance of nervous system function that this girl demonstrates. Further, one would raise the question of whether this is an actual intelligence deficiency per se.

The evaluation of the child's nervous system function is, perhaps, an important facet to the consideration of the method of education to be applied for the individual child.

It would seem especially important to evaluate children at an early age when the learning retardation first becomes apparent. Perhaps many children can be spared not only the ordeal of attempting or being expected to achieve a level of learning or behavior of which their nervous system is incapable. Further, the nervous system evaluation at this stage might enable us to pursue an educational program that is not based simply on the overt symptoms of a " behavior disturbance " or the fact that the child achieves less than a certain score on a group I.Q. test.

Some of these children might fare better by an approach described by Kephart and Lehtinen in their educational approach to the brain damaged child, or by techniques as described in their book " The Slow Learner in the Classroom." A neurological evaluation should not be geared to whether or not there is actual brain damage. It is this rigid and, in a sense, artificial distinction that does not always permit proper placement for some of these children. The evaluation, when possible, should be expressed in terms of how, and to what degree, the child's nervous system is likely to affect the educational process, whether this be in terms of actual anatomic damage, immaturity, or unknown factors.

A boy such as L.C., who is a nonreader, could possibly have had a meaningful educational experience in his early school years, had he been spared the ordeal of being in an educational setting where reading was expected. In an educational program that used manual skills, there is a possibility that he might not have been a severe behavior problem. Some gain might have been possible in the area of language were he given intensive reading instruction. The overt symptom was a behavior disturbance which very likely was simply secondary to a language disturbance, which in turn is likely to be the result of minor brain injury.

R.G., a boy in the mentally retarded group, shows a most severe disturbance of nervous system functioning, including a virtual total blindness in one eye, and a marked loss of acuity in the other. His learning problem would undoubtedly differ from those children who are simply mentally retarded without any gross nervous system malfunctioning. It is likely that more progress would be made if the educational approach used was that as applied to a brain damaged child. L.M., a girl in the mentally retarded group, was not classified as brain damaged and yet, her nervous system functioning is so obviously retarded that she shows greater retardation than some of the children termed brain damaged. One should consider whether in her case educating her as a mentally deficient child has greater advantages than approaching her as a girl with some brain dysfunction.

Summary

A neurological screening was done on 40 students with a behavior disorder attending the "600" schools. Six of these students were considered to show objective neurological signs of some nervous system damage, and 19 showed signs suggestive of what the examining neurologist interpreted as being suggestive of immaturity of nervous system development.

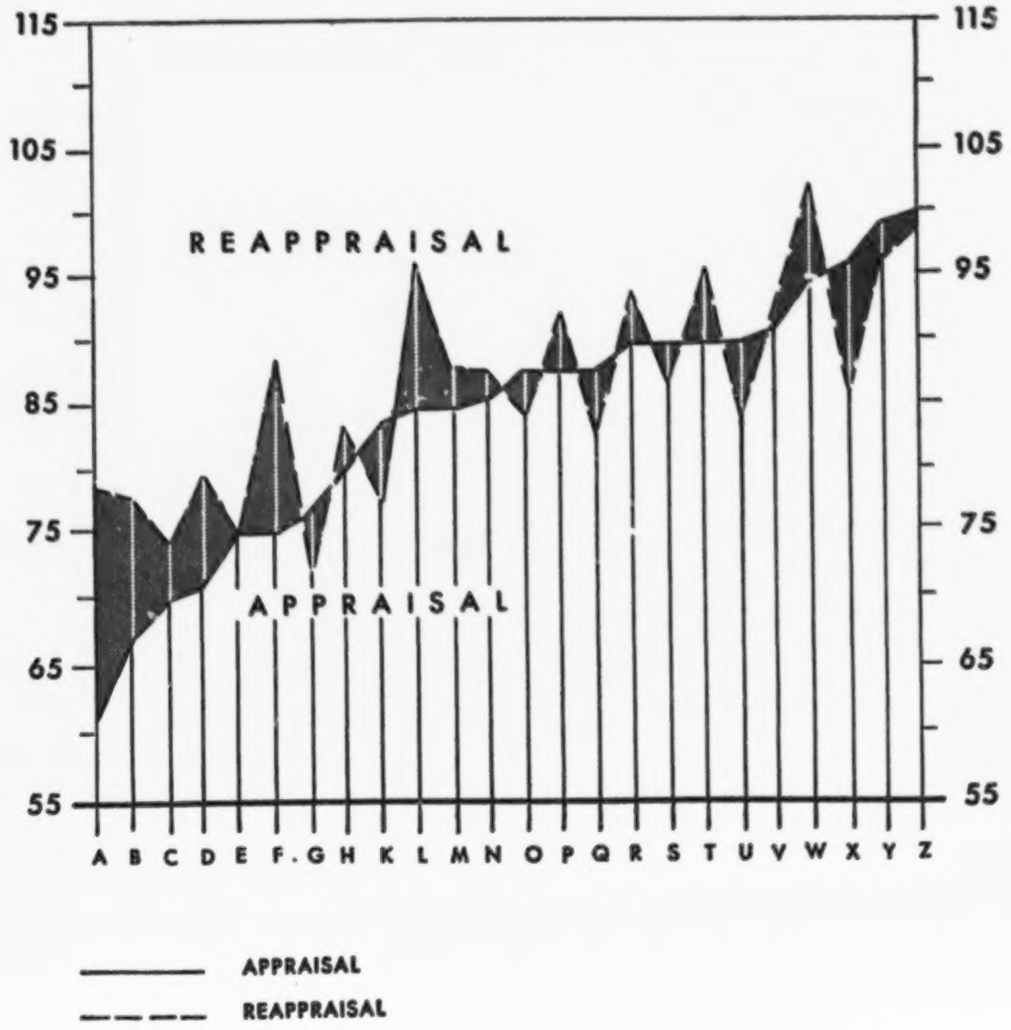
In a group of 24 students classified as mentally retarded, 5 showed objective findings indicative of some nervous system damage, and 14 showed what the examining neurologist interpreted as findings suggestive of immaturity of nervous system functioning. The findings suggest that both groups have a higher incidence of both damage to the nervous system, and immaturity of nervous system functioning, as compared with a normal population. This evidence lacks confirmation in the absence of any control or comparison study with a normal population sample.

An attempt has been made to demonstrate that the nervous system evaluation cannot be looked upon simply in terms of whether or not the student shows brain damage. It is suggested that the nervous system evaluation, especially if done in the early years, may be a help in deciding the educational approach to the individual child. It is suggested that the classifications of behavior disturbance and mentally retarded, in many instances, simply express a symptom, and that classification of these children by an overt symptom imposes limitations on a proper educational approach for the individual child.

APPENDIX F-1

Study Group I — Unit III, Experimental

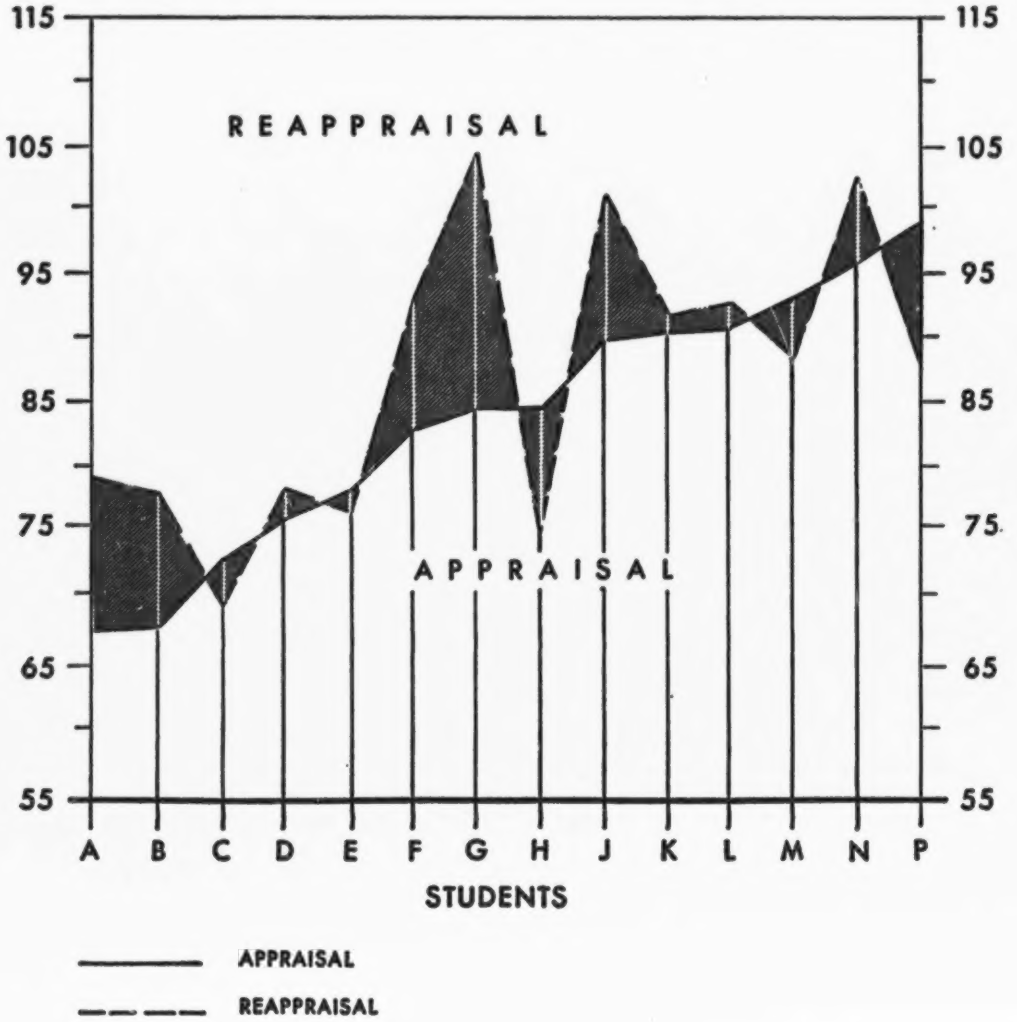
Changes in Psychological Full Scale Scores (WISC) from Appraisal to Reappraisal, 1962–64



APPENDIX F-2

Study Group I — Unit III, Comparison

Changes in Psychological Full Scale Scores (WISC) from Appraisal to Reappraisal, 1962–64



APPENDIX G

Agencies and Agency Units Directly or Indirectly Participating in Handicapped Students Research Project

I. *Voluntary Agencies*
  A. New York City Association for the Help of Retarded Children, Training Center and Sheltered Workshop
  B. Federation Employment and Guidance Service
  C. Federation of the Handicapped

II. *Official Agencies*
  A. New York City Board of Education
    1. Division of Child Welfare
      a. Bureau for Education of Physically Handicapped Children
      b. Bureau for Socially Maladjusted Children
      c. Bureau for Children with Retarded Mental Development
    2. Bureau of Educational Research*
    3. Bureau of Child Guidance*

  B. New York City Department of Health, Maternal and Child Health Services
    1. Bureau for Handicapped Children
    2. Bureau for School Health

  C. State Education Department
    1. Division of Vocational Rehabilitation
    2. Division of Pupil Personnel Services*
      a. Bureau of Guidance
      b. Bureau for Handicapped Children
      c. Bureau of Psychological Services
    3. Division of Law
    4. Division of Research

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* Partial involvement in study.

APPENDIX H

D.V.R. Project Staff

Adrian Levy, Assistant Commissioner of Education
Morris Klapper, Project Director

Regular Professional Staff

Mrs. Olga Riley, Supervisor, Senior Rehabilitation Counselor
Ellis Reida, Rehabilitation Counselor
Mrs. Arlene Eisenman, Rehabilitation Counselor
Mrs. Estella Lerner,* Rehabilitation Counselor
Sylvester Carter, M.D., Chief Medical Consultant
Walter Neff, Ph.D., Research Consultant
David Biser,* M.D., Neurology and Psychiatry
Milford Blackwell,* M.D., Neurology and Psychiatry

Secretarial and Technical

Mrs. Cora Johnson, Senior Stenographer
Mrs. Martha Hill, Senior Statistical Clerk
Alba Gonzalez, Stenographer
Frances Tinghitella, Stenographer

Other Specialty Examiners

Margaret Giannini, M.D., Pediatrics (in retardation)
Walter Schachat,* M.D., Ophthalmology
Harold Michal-Smith, Ph.D., Psychology
Helen Diers, Ph.D., Psychology
Edouard Wilson,* Psychology
Irwin Neufeld, M.D., General Medicine
Domenic Schepis, M.D., General Medicine

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* Partial involvement in study.